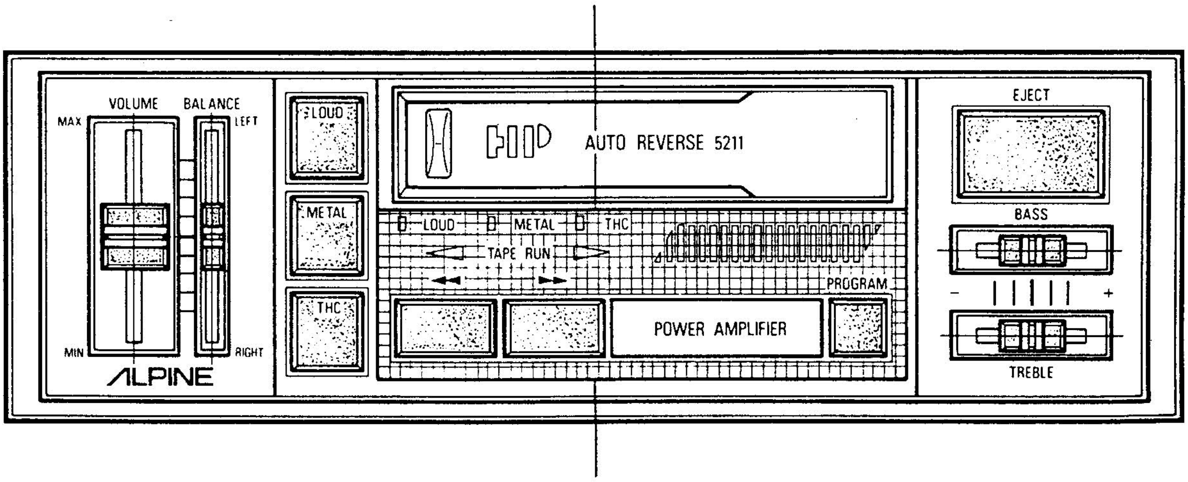
ALPINE SERVICE MANUAL

Cassette Auto Reverse


VOLUME
BALANCE
MAX
LEFT
MIN
RIGHT
ALPINE
LOUD
METAL
THC
AUTO REVERSE 5211
LOUD
METAL
THC
TAPE RUN
PROGRAM
POWER AMPLIFIER
EJECT
BASS
-
+
TREBLE

For the tape mechanism parts of this model, refer to the GW Series Service Manual (Part No. 68P61811F01).

5211

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Specifications

Wow & Flutter (JIS, WRMS/MTT-111)	0.2%
Tape Speed (MTT-111)	4.76 cm/sec. + 3.0 to – 1.0%
Signal to Noise Ratio (MTT-112)	50 dB
Distortion (MTT-118)	3%
Frequency Response (– 3 dB/MTT-216)	Low; 80 Hz/High; 8,000 Hz
Separation (MTT-141)	30 dB
Crosstalk (MTT-121)	50 dB
Fast Forward & Rewind Time (C-60)	100 sec.
Power Supply	14.0V DC
Load Impedance	4 ohm
Output Power (10% THD, MTT-212)	12W/CH
Semiconductors	4 ICs, 14 Transistors, 7 Diodes
Dimensions	Chassis (W x H x D); 160 x 50 x 145mm Nosepiece (W x H x D); 160 x 50 x 15mm
Weight	1.45 kg

Parts Locations and Disassembly Instructions

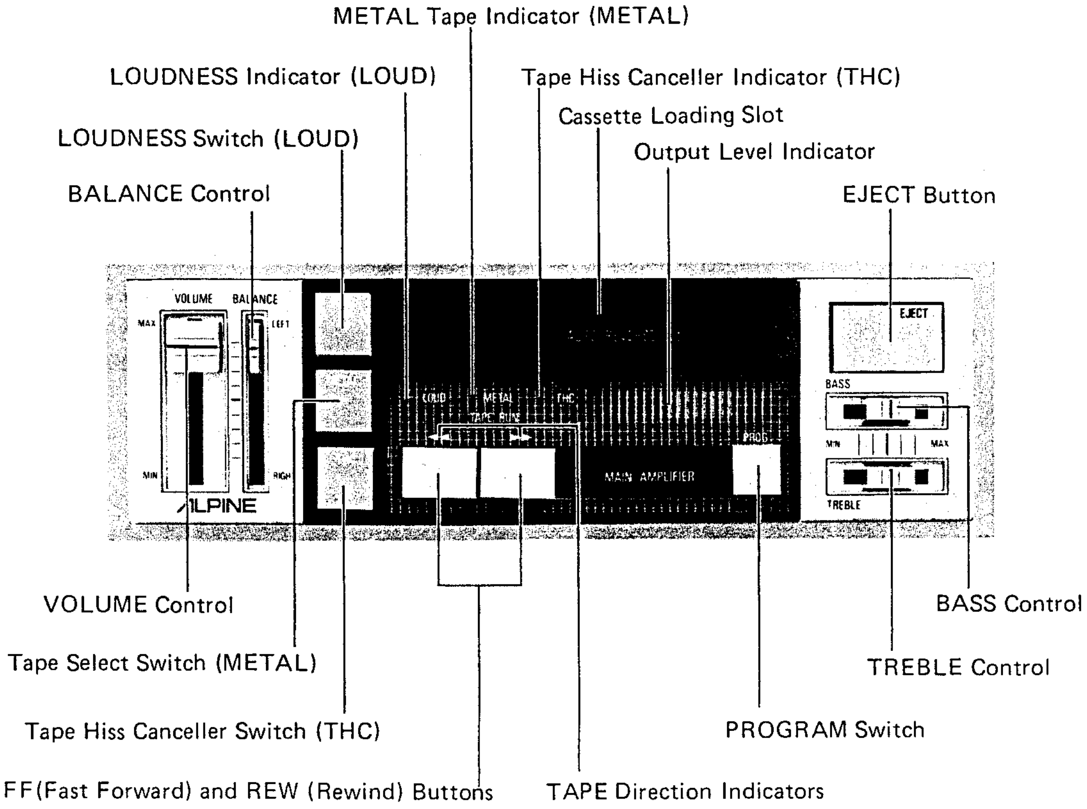

METAL Tape Indicator (METAL)
LOUDNESS Indicator (LOUD)
Tape Hiss Canceller Indicator (THC)
Cassette Loading Slot
LOUDNESS Switch (LOUD)
Output Level Indicator
BALANCE Control
EJECT Button
VOLUME
BALANCE
MAX
LEFT
MIN
RIGHT
ALPINE
LOUD
METAL
THC
TAPE RUN
PROG.
MAIN AMPLIFIER
EJECT
BASS
MIN
MAX
TREBLE
VOLUME Control
BASS Control
Tape Select Switch (METAL)
TREBLE Control
Tape Hiss Canceller Switch (THC)
PROGRAM Switch
FF(Fast Forward) and REW (Rewind) Buttons
TAPE Direction Indicators

Figure 2

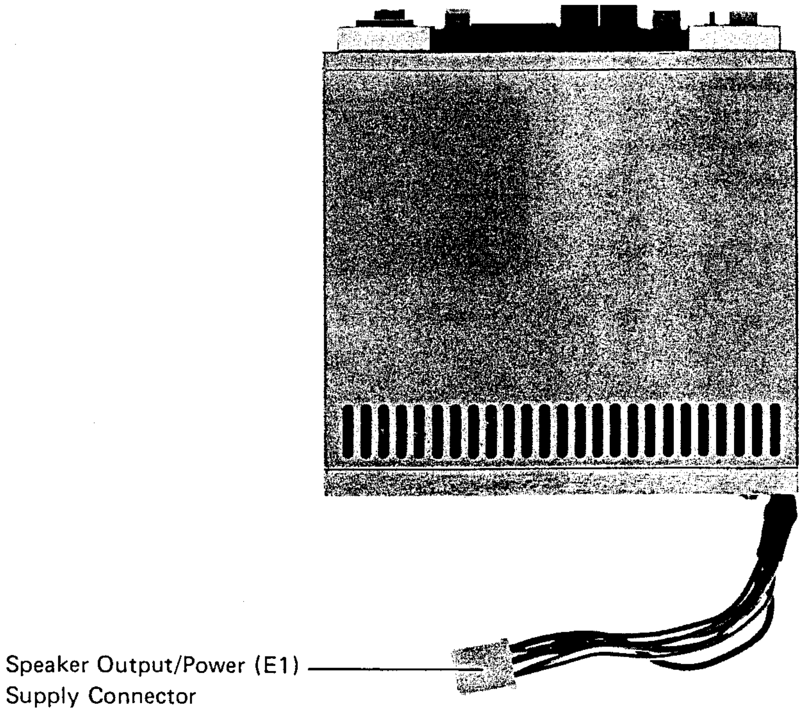

Speaker Output/Power (E1)
Supply Connector

Figure 1

1. Removal of Top Cover

(1) Remove four screws marked " ○ " as shown in Figure 3 and 4, and lift it upward.

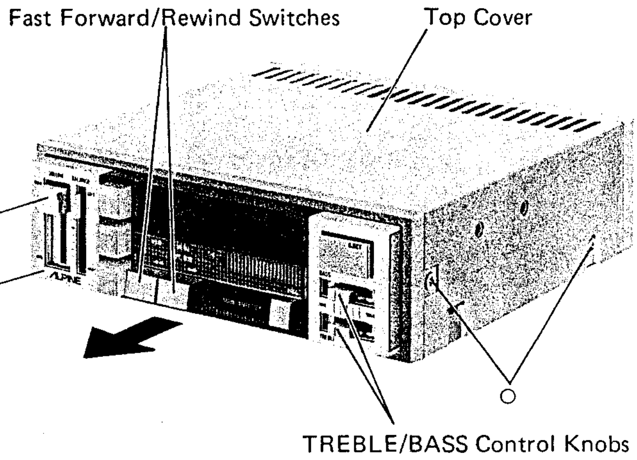

Fast Forward/Rewind Switches
Top Cover
VOLUME Control Knob
Nosepiece
○
TREBLE/BASS Control Knobs

Figure 3

2. Removal of Nosepiece

(1) After removal of the top cover, take off each control knob as shown in Figure 3.

(2) Pull the nosepiece in the arrow direction as shown in Figure 3 and disconnect three connectors of the switch/LED/Volume P.C. Board assembly from the master P.C. Board Assembly.

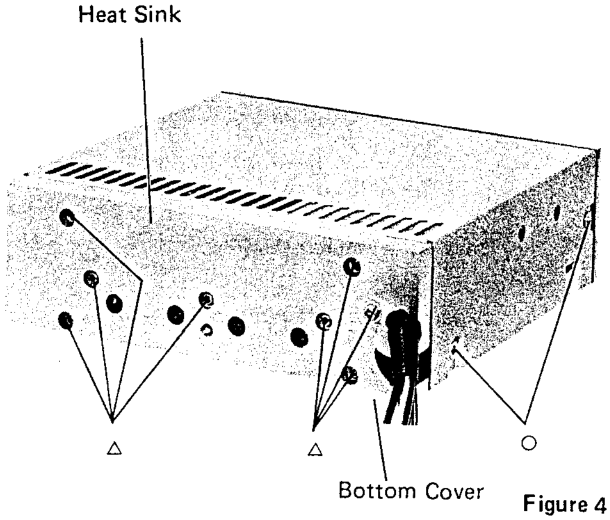

Heat Sink
△
△
○
Bottom Cover

Figure 4

3. Removal of Switch/LED/VOLUME P.C. Board Assembly

(1) After removal of the nosepiece, remove three screws marked " □ " as shown in Figure 5.

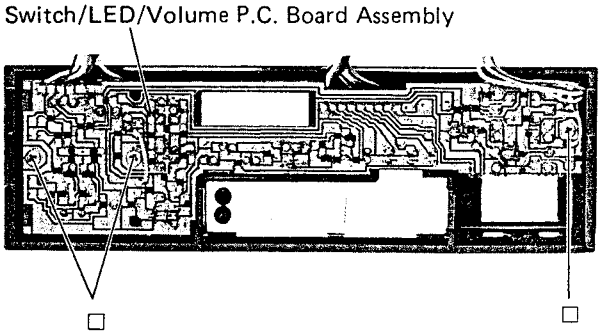

Switch/LED/Volume P.C. Board Assembly
□
□

Figure 5

4. Removal of Bottom Cover and Head Sink

(1) Remove eight screws marked " △ " as shown in Figure 4, and the bottom cover and the heat sink can be easily removed out.

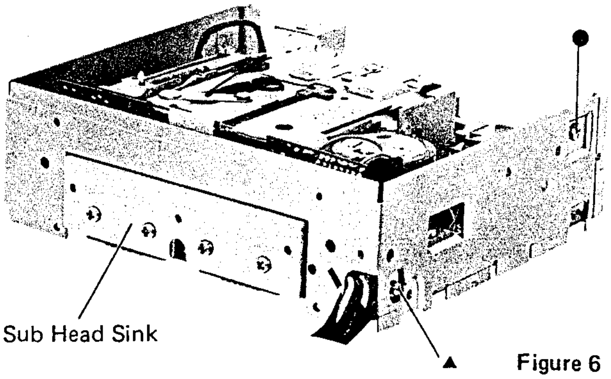
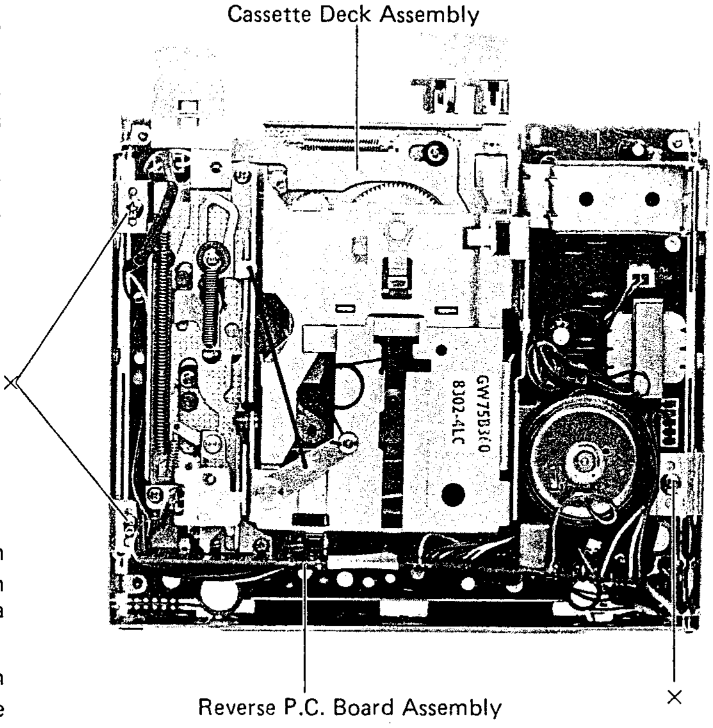

Sub Head Sink
▲

Figure 6

5. **Removal of Cassette Deck Assembly with Reverse P.C. Board Assembly**
   (1) Remove three screws marked " X " as shown in Figure 7 and the one screw marked " ● " as shown in Figure 6.
   (2) Disconnect three connectors from the master P.C. Board Assembly, and the cassette deck assembly can be easily removed out together with the reverse P.C. Board assembly.

6. **Removal of Reverse P.C. Board Assembly**
   (1) After removal of the cassette deck assembly with the reverse P.C. Board assembly from the main chassis, take off the soldering portions by a soldering iron as shown in Figure 8.
   (2) Remove the one screw marked " ■ " as shown in Figure 8 and disconnect all lead wires from the reverse P.C. Board assembly.


Cassette Deck Assembly
GW75B3f0
8302-41C
X
Reverse P.C. Board Assembly
×

Fiugre 7

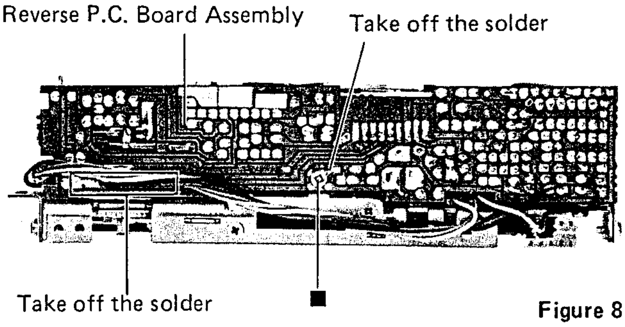

Reverse P.C. Board Assembly
Take off the solder
Take off the solder
■

Figure 8

7. **Removal of Master P.C. Board Assembly**
   (1) Remove four screws marked " ☆ " as shown in Figure 9 and the one screw marked " ▲ " as shown in Figure 6, and the master P.C. Board assembly can be removed out from the main chassis.

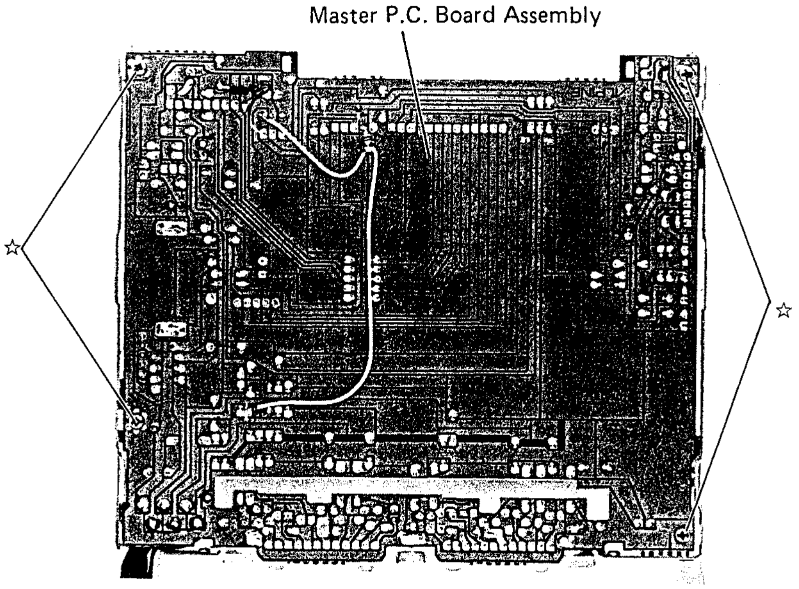

Master P.C. Board Assembly
☆
☆

Figure 9

Adjustment Procedures

1. Connections of Test Equipments

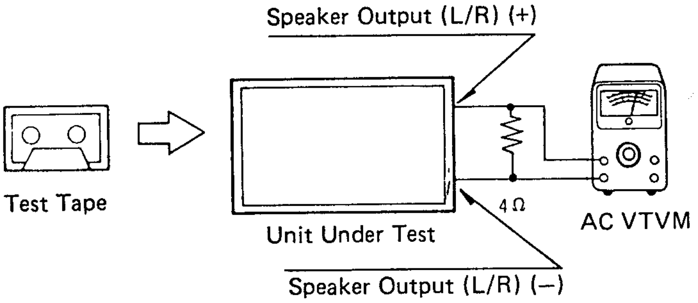

Speaker Output (L/R) (+)
Test Tape
Unit Under Test
4 Ω
AC VTVM
Speaker Output (L/R) (–)

Figure 10

2. Control Setting Positions

   BASS Control. . . . . Mechanical Center
   TREBLE Control . . . . . . Mechanical Center
   BALANCE Control . . . . . Electrical Center

3. Adjustment Procedures

Step	Adjustment Item	Connections	Test Tape	Adjustment Parts	Adjustment
1	Head Azimuth Adjustment	Figure 10	MTT-114 (10 kHz)	Head Azimuth Adjustment Screw	To obtain maximum output and no output differences on AC VTVM at Normal/Reverse side.

Adjustment Locations

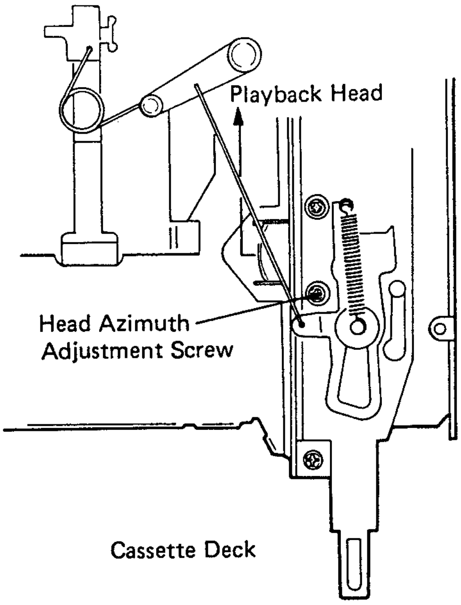
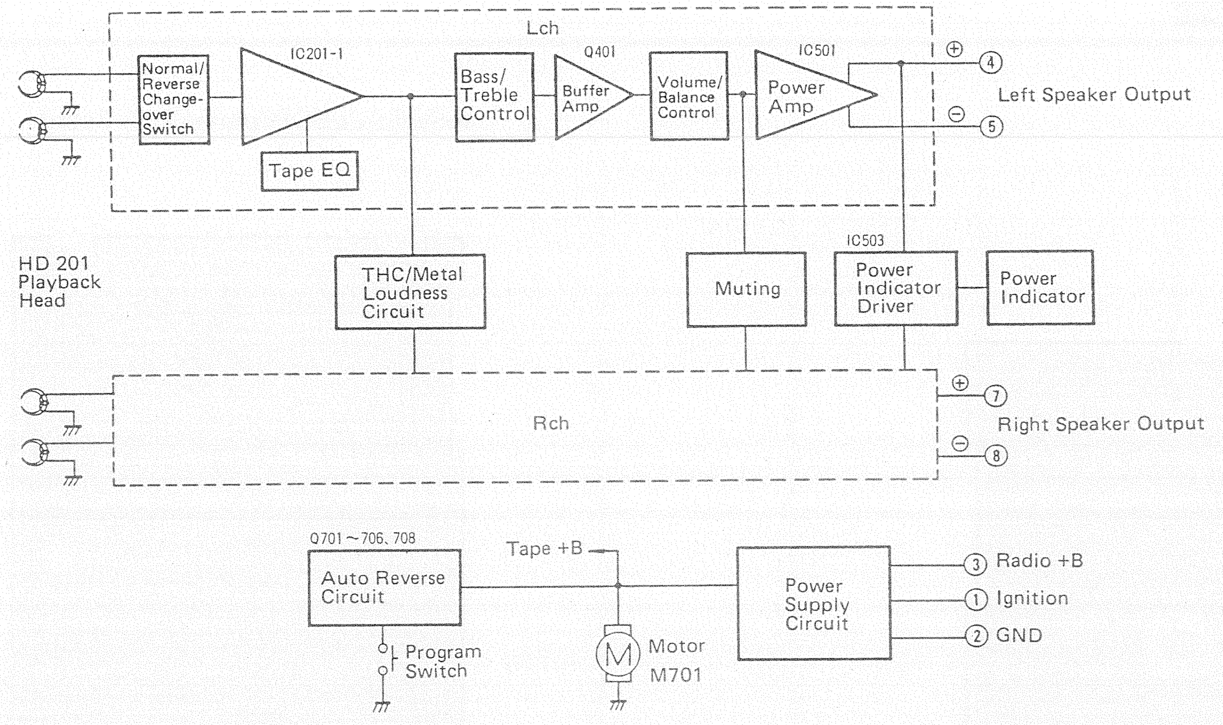

Playback Head
Head Azimuth Adjustment Screw
Cassette Deck

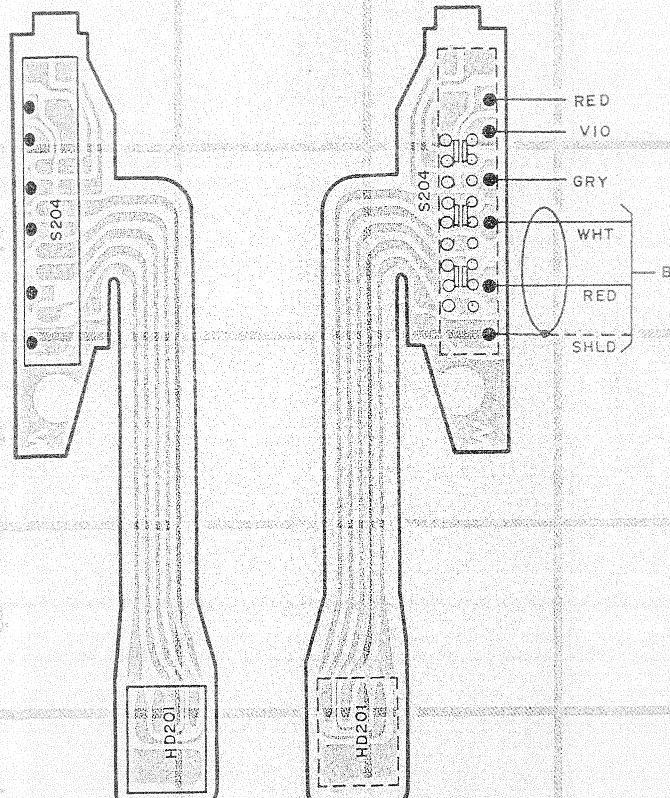
Figure 11

Block Diagram


Lch
Normal/ Reverse Change-over Switch
IC201-1
Tape EQ
Bass/ Treble Control
Q401
Buffer Amp
Volume/ Balance Control
IC501
Power Amp
④
⑤
Left Speaker Output
HD 201 Playback Head
THC/Metal Loudness Circuit
Muting
IC503
Power Indicator Driver
Power Indicator
Rch
⑦
⑧
Right Speaker Output
Q701~706, 708
Auto Reverse Circuit
Program Switch
Tape +B
Motor M701
Power Supply Circuit
③ Radio +B
① Ignition
② GND

Parts Layout on P.C. Boards

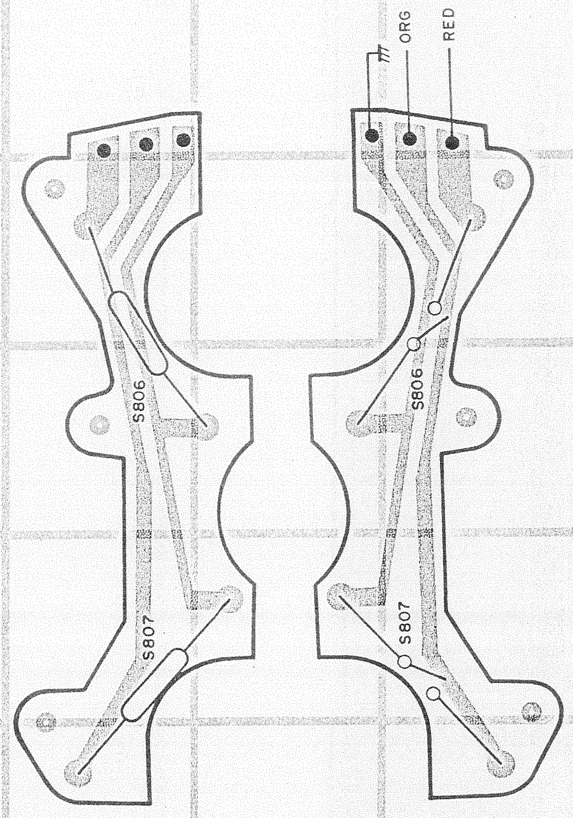
- Head & Switch P.C. Board


S204
HD201
RED
VIO
GRY
WHT
BRN
RED
SHLD

Top View

Bottom View

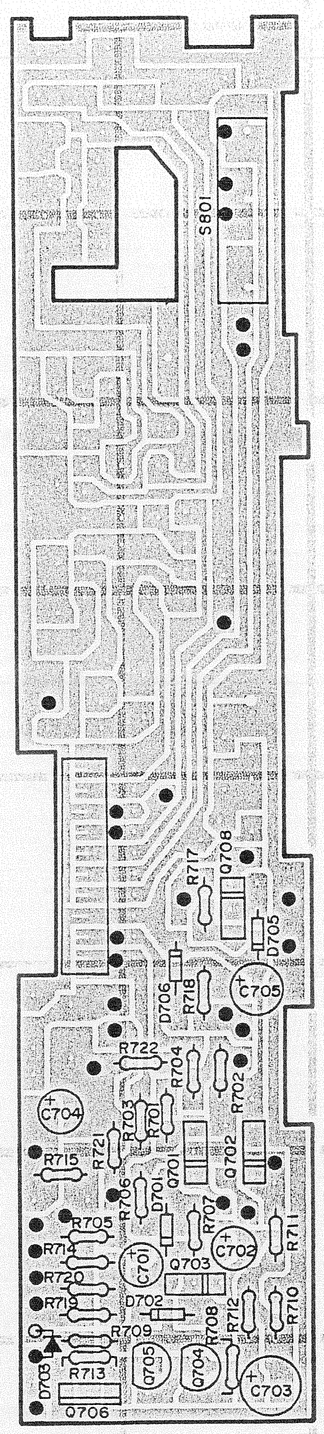
- Reed Switch P.C. Board


ORG
RED
S806
S807

Top View

Bottom View

- Reverse P.C. Board


S801
R717
Q708
D705
D706
R718
C705
R722
R704
R702
C704
R703
R721
R706
D701
Q701
Q702
R715
R705
R714
R720
R719
C701
Q703
R707
C702
R711
D702
R709
R708
R712
R710
D703
R713
Q705
Q704
C703
Q706

Q708

E	13.9V
C	0V
B	13.5V

Q702

E	0.2V
C	0.9V
B	0.16V

Q701

E	0V~3.5V
C	0.9V
B	1.5V

Q703

E	0V
C	0.2V
B	0.1V

Q704

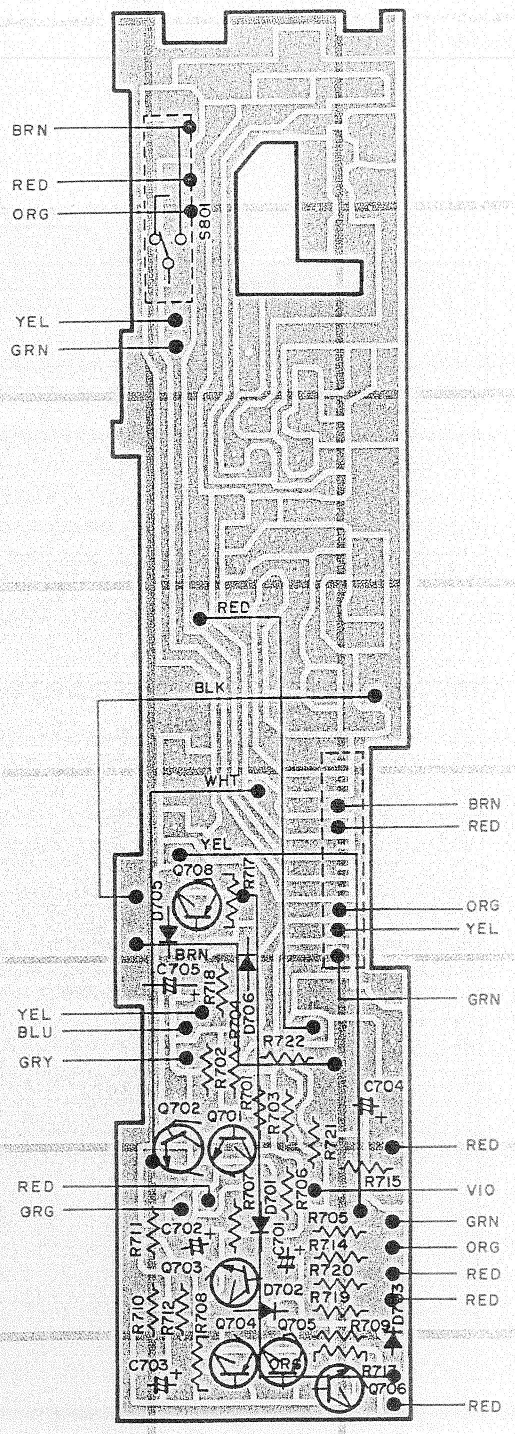
E	13.4V
C	13.3V
B	12.7V

Q705

E	13.4V
C	0V
B	13.3V

Q706

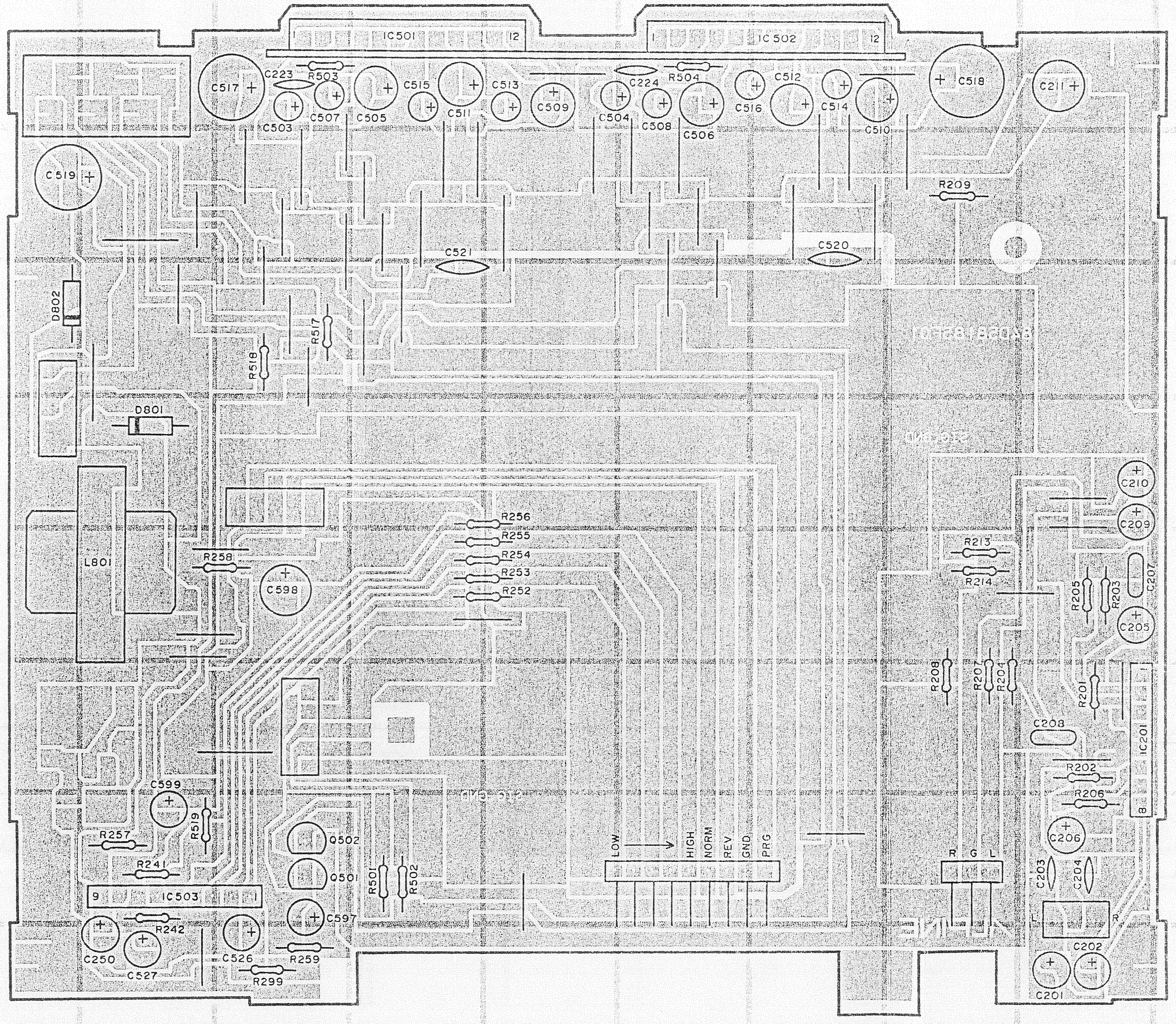
E	0V
C	13.6V
B	0V


BRN
RED
ORG
S801
YEL
GRN
RED
BLK
WHT
BRN
RED
YEL
Q708
D705
R717
ORG
YEL
BRN
C705
R718
D706
GRN
YEL
BLU
GRY
R722
R702
R704
C704
Q702
Q701
R703
R721
RED
R715
VIO
RED
GRG
R711
C702
D701
R706
R705
R714
GRN
ORG
RED
RED
Q703
R720
R719
D702
R710
R712
R708
Q704
Q705
R709
D703
C703
R713
Q706
RED

Top View

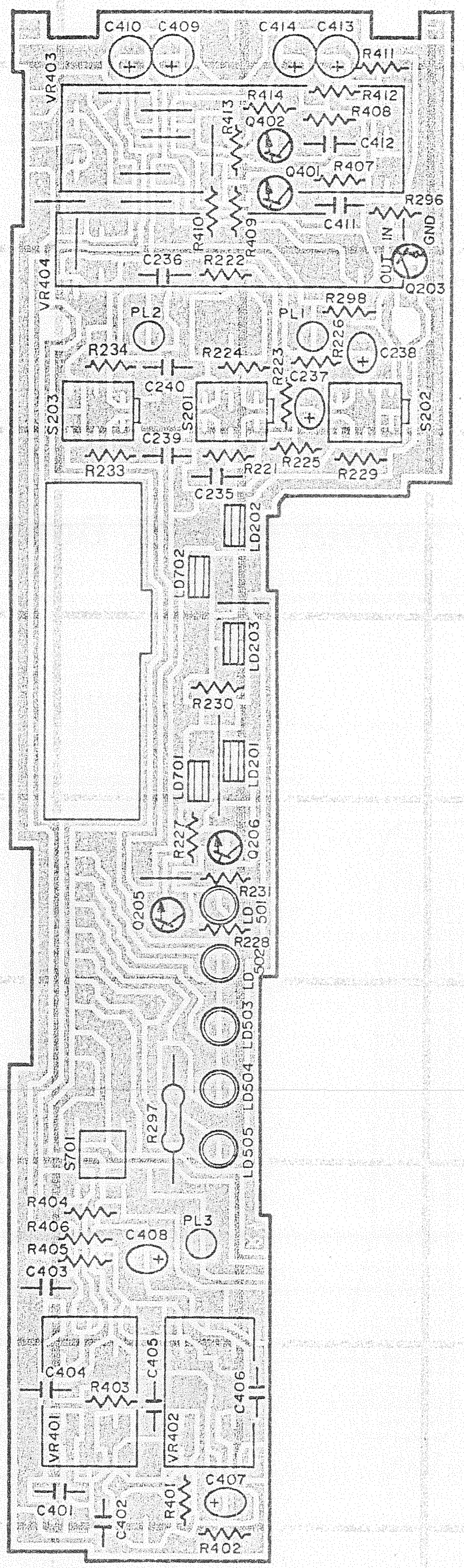
Bottom View

- Master P.C. Board


IC501
12
IC502
12
C517
C223
R503
C507
C505
C503
C515
C511
C513
C509
C224
R504
C504
C508
C506
C516
C512
C514
C510
C518
C211
C519
R209
C521
C520
D802
R517
R518
D801
L801
R258
C598
R256
R255
R254
R253
R252
C210
C209
R213
R214
C207
R205
R203
C205
R208
R207
R204
R201
C208
IC201
R202
R206
C206
C203
C204
C202
C201
C599
R519
R257
R241
Q502
Q501
C597
R501
R502
9
IC503
R242
C250
C527
C526
R259
R299
LOW
HIGH
NORM
REV
GND
PRG
R
G
L

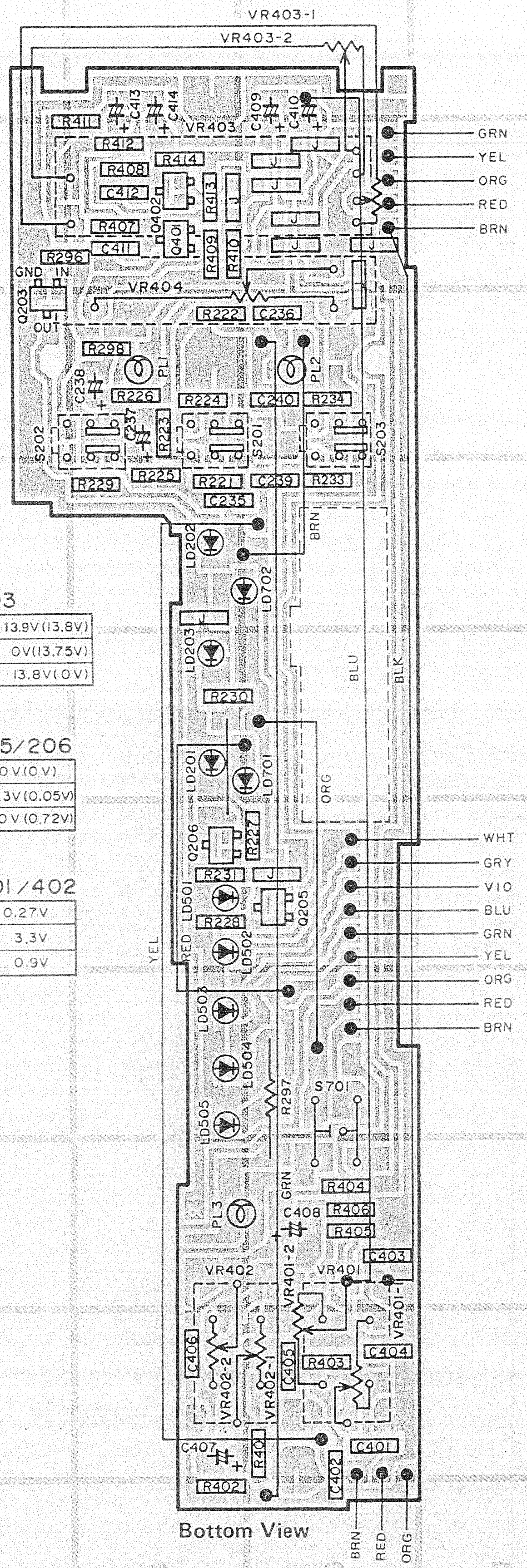
Top View

- Switch/LED/Volume P.C. Board


C410
C409
C414
C413
R411
VR403
R414
R412
R413
Q402
R408
C412
Q401
R407
R296
R410
R409
C411
IN
OUT
GND
C236
R222
Q203
VR404
PL2
PL1
R298
R234
R224
R226
C238
C240
R223
C237
S203
S201
S202
C239
R233
R221
R225
R229
C235
LD202
LD702
LD203
R230
LD701
LD201
R227
Q206
Q205
R231
LD501
R228
LD502
LD503
LD504
R297
S701
LD505
R404
R406
C408
PL3
R405
C403
C404
R403
C405
C406
VR401
VR402
R401
C407
C401
C402
R402

Top View

Switch/LED/Volume P.C. Board


VR403-1
VR403-2
R411
R412
C413
C414
VR403
C409
C410
R408
R414
C412
Q402
R413
R407
C411
Q401
R409
R410
R296
GND
IN
OUT
Q203
VR404
R222
C236
R298
PL1
PL2
C238
R226
R224
C240
R234
S202
C237
R223
S201
S203
R229
R225
R221
C239
R233
C235
LD202
LD702
LD203
R230
LD201
LD701
Q206
R227
R231
LD501
Q205
R228
LD502
LD503
LD504
LD505
R297
S701
PL3
C408
R404
R406
R405
C403
VR402
VR401-2
VR401
VR401-1
C406
VR402-2
VR402-1
C405
R403
C404
C407
R401
C402
C401
R402
GRN
YEL
ORG
RED
BRN
BLU
BLK
WHT
GRY
VIO
BRN
RED
ORG

Bottom View

Q203

GND	13.9V(13.8V)
OUT	0V(13.75V)
IN	13.8V(0V)

Q205/206

E	0V(0V)
C	12.3V(0.05V)
B	0V(0.72V)

Q401/402

E	0.27V
C	3.3V
B	0.9V

Master P.C. Board

IC201

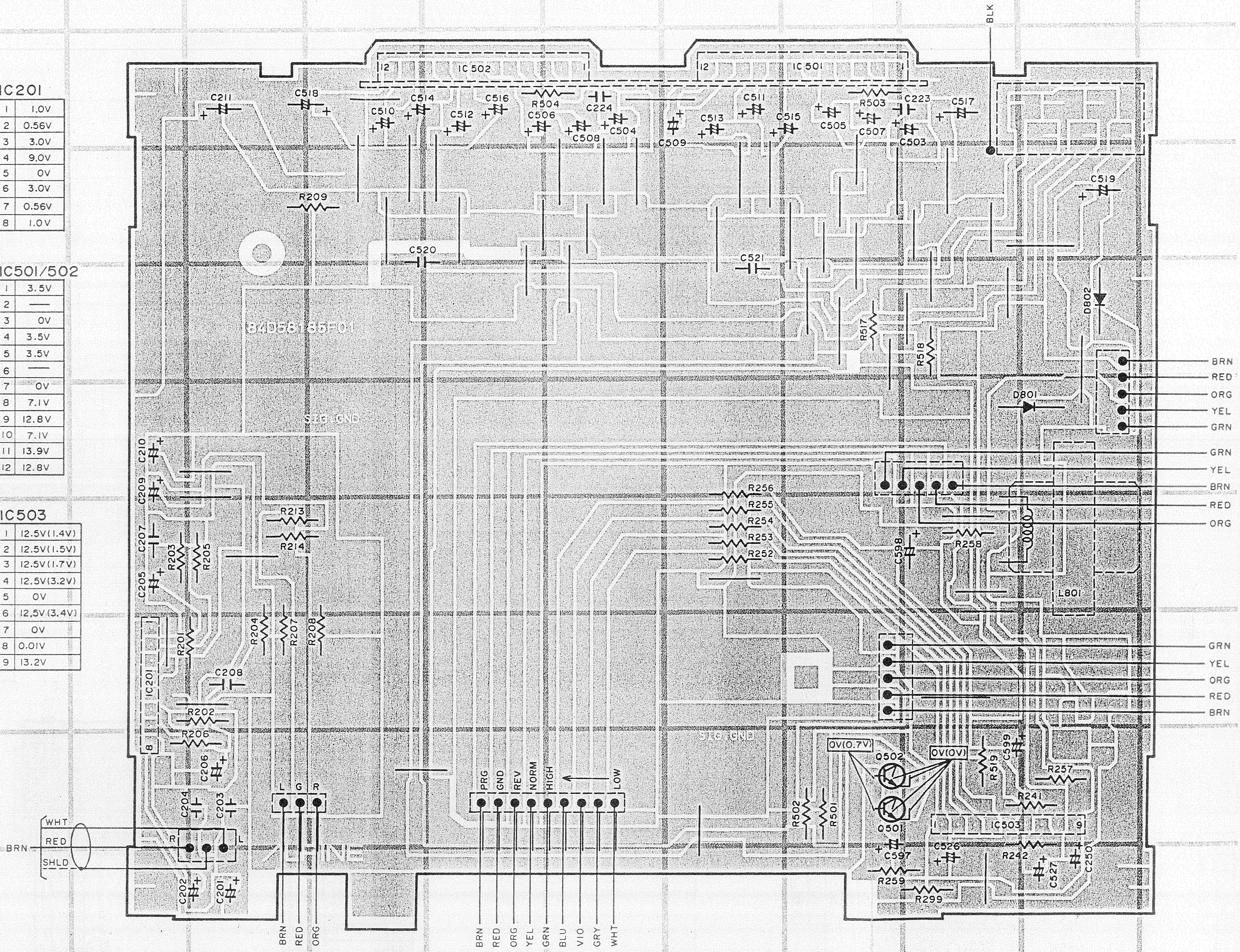
1	1.0V
2	0.56V
3	3.0V
4	9.0V
5	0V
6	3.0V
7	0.56V
8	1.0V

IC501/502

1	3.5V
2	—
3	0V
4	3.5V
5	3.5V
6	—
7	0V
8	7.1V
9	12.8V
10	7.1V
11	13.9V
12	12.8V

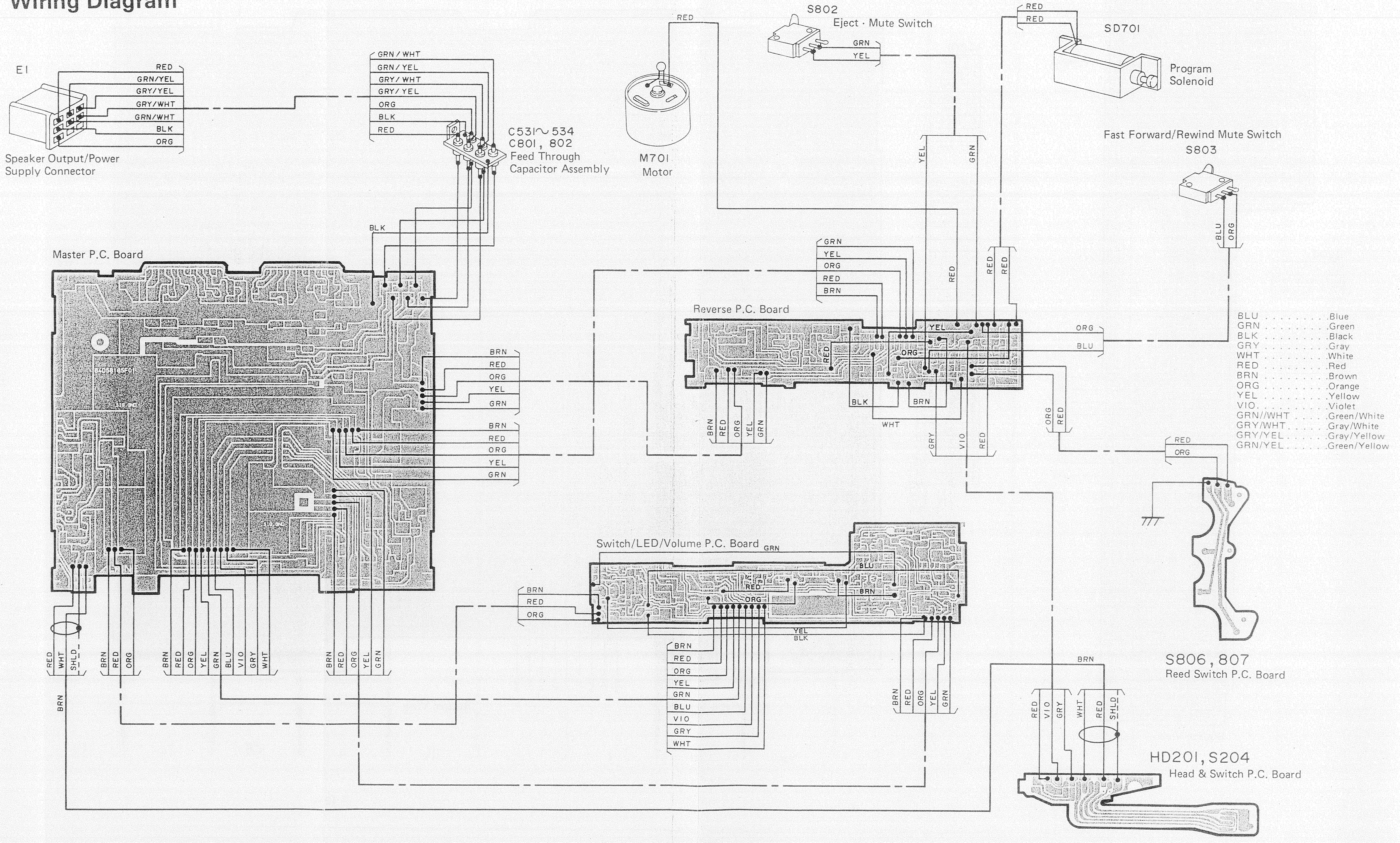
IC503

1	12.5V(1.4V)
2	12.5V(1.5V)
3	12.5V(1.7V)
4	12.5V(3.2V)
5	0V
6	12.5V(3.4V)
7	0V
8	0.01V
9	13.2V

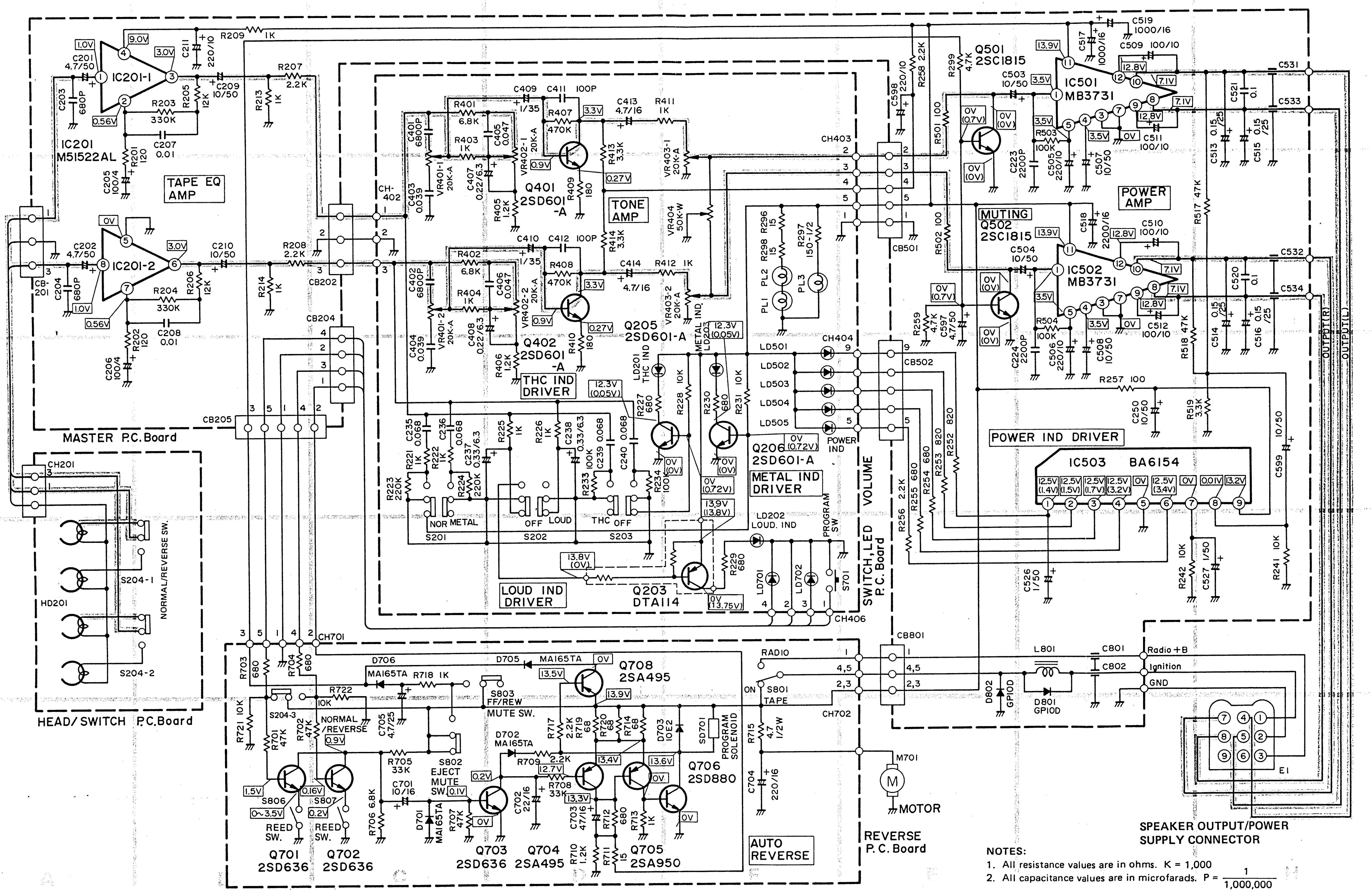

BLK
IC502
IC501
C211
C518
C514
C516
R504
C224
C511
R503
C223
C517
C510
C512
C506
C504
C508
C513
C515
C505
C507
C503
C509
R209
C519
C520
C521
84D58185F01
R517
R518
D802
SIG. GND
D801
C210
C209
R213
R214
R256
R255
R254
R253
R252
C207
R203
R205
C598
R258
C205
L801
R201
R204
R207
R208
IC201
C208
R202
R206
C206
C204
C203
L
G
R
PRG
GND
REV
NORM
HIGH
LOW
0V(0.7V)
Q502
0V(0V)
R519
C599
R257
R241
R502
R501
Q501
IC503
C597
C526
R242
C527
C250
R259
R299
C202
C201
WHT
RED
SHLD
BRN
BRN
RED
ORG
YEL
GRN
BLU
VIO
GRY
WHT

Bottom View

Wiring Diagram


E1
RED
GRN/YEL
GRY/YEL
GRY/WHT
GRN/WHT
BLK
ORG
Speaker Output/Power Supply Connector
GRN/WHT
GRN/YEL
GRY/WHT
GRY/YEL
ORG
BLK
RED
C531~534
C801, 802
Feed Through Capacitor Assembly
RED
M701
Motor
S802
Eject · Mute Switch
GRN
YEL
RED
RED
SD701
Program Solenoid
Fast Forward/Rewind Mute Switch
S803
BLU
ORG
YEL
GRN
BLK
Master P.C. Board
GRN
YEL
ORG
RED
BRN
RED
RED
RED
Reverse P.C. Board
YEL
ORG
RED
ORG
BLU
BRN
RED
ORG
YEL
GRN
BRN
RED
ORG
YEL
GRN
BRN
RED
ORG
YEL
GRN
BLK
BRN
WHT
GRY
VIO
RED
ORG
RED
RED
ORG
BLU Blue
GRN Green
BLK Black
GRY Gray
WHT White
RED Red
BRN Brown
ORG Orange
YEL Yellow
VIO Violet
GRN/WHT Green/White
GRY/WHT Gray/White
GRY/YEL Gray/Yellow
GRN/YEL Green/Yellow
Switch/LED/Volume P.C. Board
GRN
BLU
RED
ORG
BRN
BRN
RED
ORG
YEL
BLK
RED
WHT
SHLD
BRN
RED
ORG
BRN
RED
ORG
YEL
GRN
BLU
VIO
GRY
WHT
BRN
RED
ORG
YEL
GRN
BRN
BRN
RED
ORG
YEL
GRN
BLU
VIO
GRY
WHT
BRN
RED
ORG
YEL
GRN
BRN
RED
VIO
GRY
WHT
RED
SHLD
S806, 807
Reed Switch P.C. Board
HD201, S204
Head & Switch P.C. Board

Schematic Diagram


MASTER P.C.Board
TAPE EQ AMP
IC201 M51522AL
IC201-1
IC201-2
TONE AMP
Q401 2SD601-A
Q402 2SD601-A
Q205 2SD601-A
Q206 2SD601-A
THC IND DRIVER
METAL IND DRIVER
LOUD IND DRIVER
Q203 DTA114
S201
S202
S203
NOR METAL
OFF LOUD
THC OFF
VOLUME
SWITCH, LED P. C. Board
PROGRAM SW
S701
LD201 THC IND
LD202 LOUD. IND
LD203 METAL IND
LD501
LD502
LD503
LD504
LD505
POWER IND
VR404 50K-W
POWER AMP
IC501 MB3731
IC502 MB3731
Q501 2SC1815
MUTING Q502 2SC1815
POWER IND DRIVER
IC503 BA6154
OUTPUT(R)
OUTPUT(L)
HEAD/SWITCH P.C.Board
HD201
NORMAL/REVERSE SW.
S204-1
S204-2
S204-3 NORMAL /REVERSE
S803 FF/REW MUTE SW.
S802 EJECT MUTE SW
S806 REED SW.
S807 REED SW.
Q701 2SD636
Q702 2SD636
Q703 2SD636
Q704 2SA495
Q705 2SA950
Q706 2SD880
Q708 2SA495
D701 MA165TA
D702 MA165TA
D705 MA165TA
D706 MA165TA
SD701 PROGRAM SOLENOID
M701 MOTOR
AUTO REVERSE
REVERSE P. C. Board
RADIO
S801 TAPE ON
L801
D801 GP10D
D802 GP10D
Radio +B
Ignition
GND
E1
SPEAKER OUTPUT/POWER SUPPLY CONNECTOR

NOTES:
1. All resistance values are in ohms. K = 1,000
2. All capacitance values are in microfarads. P = $\frac{1}{1,000,000}$

Electrical Parts List

Resistors (All resistors are carbon film,1/6W, ±5% unless otherwise noted.)
uF = microfarads, pF = picofarads

Symbol No.	Part No.	Description
Master P.C. Board		
IC's		
IC201	51T56391F01	M51522AL
IC501	51T53245F01	MB3731M
IC502	51T53245F01	MB3731M
IC503	51T60003F01	BA6154
Transistors		
Q501	48S43525F05	2SC1815-Y, GR
Q502	48S43525F05	2SC1815-Y, GR
Coils & Diodes		
L801	25T40405F02	Choke, Filter
D801	48T55186F01	GP10D
D802	48T55186F01	GP10D
Capacitors		
C201	23T61513F33	Electrolytic, 4.7 uF/50V
C202	23T61513F33	Electrolytic, 4.7 uF/50V
C203	21C45322G39	Ceramic, 680 pF
C204	21C45322G39	Ceramic, 680 pF
C205	23T61524F03	Electrolytic, 100 uF/4V
C206	23T61524F03	Electrolytic, 100 uF/4V
C207	08T57705F67	Mylar, 0.01 uF
C208	08T42629F67	Mylar, 0.01 uF
C209	23T61513F34	Electrolytic, 10 uF/50V
C210	23T61513F34	Electrolytic, 10 uF/50V
C211	23T51235F47	Electrolytic, 220 uF/10V
C223	08T44979P04	Ceramic, 2200 pF
C224	08T44979P04	Ceramic, 2200 pF
C250	23T61513F34	Electrolytic, 10 uF/50V
C503	23T61513F34	Electrolytic, 10 uF/50V
C504	23T61513F34	Electrolytic, 10 uF/50V
C505	23C44780F19	Electrolytic, 220 uF/10V
C506	23C44780F19	Electrolytic, 220 uF/10V
C507	23T61513F34	Electrolytic, 10 uF/50V
C508	23T61513F34	Electrolytic, 10 uF/50V
C509	23T61513F10	Electrolytic, 100 uF/10V
C510	23T61513F10	Electrolytic, 100 uF/10V
C511	23T61513F10	Electrolytic, 100 uF/10V
C512	23T61513F10	Electrolytic, 100 uF/10V
C513	23T50651F09	Alox, 0.15 uF/25V
C514	23T50651F09	Alox, 0.15 uF/25V
C515	23T50651F09	Alox, 0.15 uF/25V
C516	23T50651F09	Alox, 0.15 uF/25V
C517	23T51232F02	Electrolytic, 1000 uF/16V
C518	23T51232F01	Electrolytic, 2200 uF/16V
C519	23T51232F02	Electrolytic, 1000 uF/16V
C520	08T44979P14	Ceramic, 0.1 uF
C521	08T44979P14	Ceramic, 0.1 uF
C526	23T61513F30	Electrolytic, 1 uF/50V
C527	23T61513F30	Electrolytic, 1 uF/50V
C597	23T61513F33	Electrolytic, 4.7 uF/50V
C598	23T51235F47	Electrolytic, 220 uF/10V
C599	23T61513F34	Electrolytic, 10 uF/50V
Resistors		
R201	06S55065F43	120 ohm
R202	06S55065F43	120 ohm
R203	06S55066F26	330K ohm
R204	06S55066F26	330K ohm
R205	06S55065F91	12K ohm
R206	06S55065F91	12K ohm
R207	06S55065F73	2.2K ohm
R208	06S55065F73	2.2K ohm
R209	06S55065F65	1K ohm
R213	06S55065F65	1K ohm
R214	06S55065F65	1K ohm
R241	06S55065F89	10K ohm
R242	06S55065F89	10K ohm
R252	06S55065F63	820 ohm
R253	06S55065F63	820 ohm
R254	06S55065F61	680 ohm
R255	06S55065F61	680 ohm
R256	06S55065F73	2.2K ohm
R257	06S55065F41	100 ohm
R258	06S55065F73	2.2K ohm
R259	06S55065F81	4.7K ohm
R299	06S55065F81	4.7K ohm
R501	06S55065F41	100 ohm
R502	06S55065F41	100 ohm
R503	06S55066F14	100K ohm
R504	06S55066F14	100K ohm
R517	06S55066F06	47K ohm
R518	06S55066F06	47K ohm
R519	06S55065F77	3.3K ohm
Switch, LED & Volume P.C. Board		
Transistors		
Q203	48T60237F11	DTA114S
Q205	48T52438F01	2SD601A
Q206	48T52438F01	2SD601A
Q401	48T52438F01	2SD601A
Q402	48T52438F01	2SD601A
Switches, LED's & Lamps		
S201	40T58173F01	Switch, SPH221A (Metal)
S202	40T58173F01	Switch, SPH221A (Loudness)
S203	40T58173F01	Switch, SPH221A (THC)
S701	40T51411F02	Switch, Tact (Program)
LD201	48T57195F01	LED, PG5556KY (GRN) (THC)
LD202	48T57195F01	LED, PG5556KY (GRN) (Loudness)
LD203	48T57195F01	LED, PG5556KY (GRN) (Metal)
LD501	48T50561F01	LED, PG5724KY (GRN) (Power)
LD502	48T50561F01	LED, PG5724KY (GRN) (Power)
LD503	48T50561F02	LED, AY5724K (YEL) (Power)
LD504	48T50561F02	LED, AY5724K (YEL) (Power)
LD505	48T50561F03	LED, PR5724K (RED) (Power)
LD701	48T57195F01	LED, PG5556KY (GRN) (▶)
LD702	48T57195F01	LED, PG5556KY (GRN) (◀)
PL1	65B43447J01	Lamp, Pilot 6V-65mA
PL2	65B43447J01	Lamp, Pilot 6V-65mA
PL3	65B43447J01	Lamp, Pilot 6V-65mA
Capacitors		
C235	08S53332F56	Chip, 0.068 uF
C236	08S53332F56	Chip, 0.068 uF
C237	23T55252F04	Tantalum, 0.33 uF/6.3V
C238	23T55252F04	Tantalum, 0.33 uF/6.3V
C239	08S53332F56	Chip, 0.068 uF
C240	08S53332F56	Chip, 0.068 uF
C401	08S53332F45	Chip, 0.0068 uF
C402	08S53332F45	Chip, 0.0068 uF
C403	08S53332F54	Chip, 0.039 uF
C404	08S53332F54	Chip, 0.039 uF
C405	08S53332F55	Chip, 0.047 uF
C406	08S53332F55	Chip, 0.047 uF
C407	23T55252F03	Tantalum, 0.22 uF/6.3V
C408	23T55252F03	Tantalum, 0.22 uF/6.3V
C409	23S41059P07	Tantalum, 1 uF/35V
C410	23S41059P07	Tantalum, 1 uF/35V
C411	08S53332F23	Chip, 100 pF
C412	08S53332F23	Chip, 100 pF
C413	23S41059P18	Tantalum, 4.7 uF/16V
C414	23S41059P18	Tantalum, 4.7 uF/16V
Resistors (All resistors are chip, 1/8W, ±5% unless otherwise noted)		
R221	06S53330F53	1K ohm
R222	06S53330F53	1K ohm
R223	06S53331F10	220K ohm
R224	06S53331F10	220K ohm
R225	06S53330F53	1K ohm

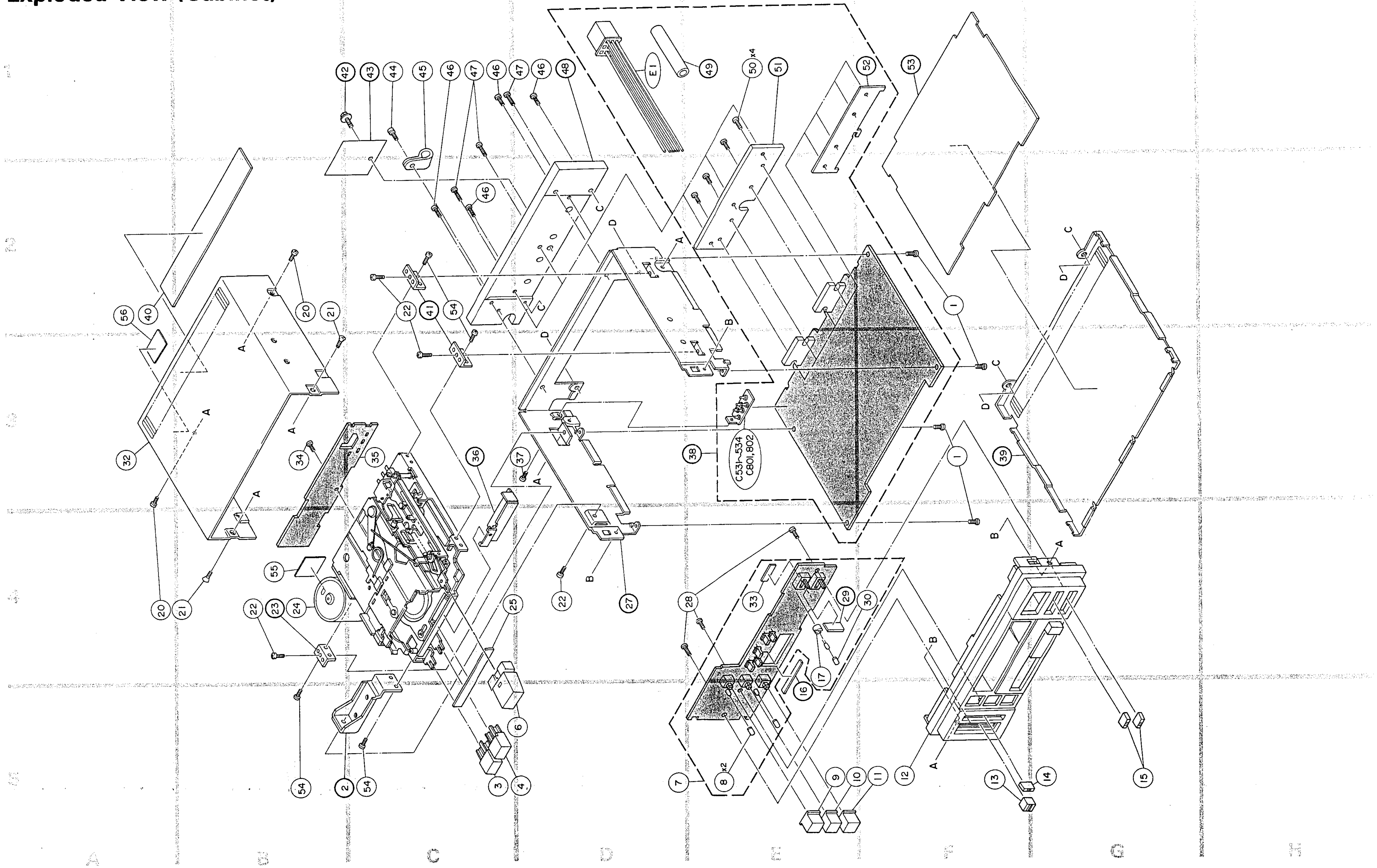
Symbol No.	Part No.	Description
R226	06S53330F53	1K ohm
R227	06S53330F49	680 ohm
R228	06S53330F77	10K ohm
R229	06S53330F49	680 ohm
R230	06S53330F49	680 ohm
R231	06S53330F77	10K ohm
R233	06S53331F02	100K ohm
R234	06S53331F02	100K ohm
R296	06S53330F09	15 ohm
R297	06D40801G43	Carbon, Film 150 ohm ½W
R298	06S53330F09	15 ohm
R401	06S53330F73	6.8K ohm
R402	06S53330F73	6.8K ohm
R403	06S53330F53	1K ohm
R404	06S53330F53	1K ohm
R405	06S53330F55	1.2K ohm
R406	06S53330F55	1.2K ohm
R407	06S53331F18	470K ohm
R408	06S53331F18	470K ohm
R409	06S53330F35	180 ohm
R410	06S53330F35	180 ohm
R411	06S53330F53	1K ohm
R412	06S53330F53	1K ohm
R413	06S53330F65	3.3K ohm
R414	06S53330F65	3.3K ohm
VR401	18T58188F01	Variable, 20K ohm-A (Treble)
VR402	18T58188F01	Variable, 20K ohm-A (Bass)
VR403	18T58189F01	Variable, 20K ohm-A (Volume)
VR404	18T58191F01	Variable, 50K ohm-W (Balance)
Reverse P.C. Board		
Transistors		
Q701	48S40627U01	2SD636-Q
Q702	48S40627U01	2SD636-Q
Q703	48S40627U01	2SD636-Q
Q704	48S43238G01	2SA495-Y
or	48T51118F01	2SA1015-Y
Q705	48T43526F02	2SA950-Y
Q706	48T42620F02	2SD880-Y
Q708	48S43238G01	2SA495-Y
or	48T51118F01	2SA1015-Y

Symbol No.	Part No.	Description
Diodes		
D701	48T44813F01	MA165TA
or	48T58583F01	SS176
D702	48T44813F01	MA165TA
or	48T58583F01	SS176
D703	48C40235G02	10E2
or	48S40477U01	1N4003
D705	48T44813F01	MA165TA
or	48T58583F01	SS176
D706	48T44813F01	MA165TA
or	48T58583F01	SS176
Capacitors		
C701	23T61524F13	Electrolytic, 10 uF/16V
C702	23T61524F14	Electrolytic, 22 uF/16V
C703	23T61524F16	Electrolytic, 47 uF/16V
C704	23B44780P17	Electrolytic, 220 uF/16V
C705	23T43247F08	Electrolytic, 4.7 uF/25V
Resistors		
R701	06S55066F06	47K ohm
R702	06S55066F06	47K ohm
R703	06S55065F61	680 ohm
R704	06S55065F61	680 ohm
R705	06S55066F02	33K ohm
R706	06S55065F85	6.8K ohm
R707	06S55066F06	47K ohm
R708	06S55066F02	33K ohm
R709	06S55065F73	2.2K ohm
R710	06S55065F67	1.2K ohm
R711	06S55065F21	15 ohm
R712	06S55065F61	680 ohm
R713	06S55065F65	1K ohm
R714	06S55065F37	68 ohm
R715	06C43205J30	Metal, Film, 4.7 ohm ½W
R717	06S55065F73	2.2K ohm
R718	06S55065F65	1K ohm
R719	06S55065F37	68 ohm
R720	06S55065F37	68 ohm
R721	06S55065F89	10K ohm
R722	06S55065F89	10K ohm

Symbol No.	Part No.	Description
Miscellaneous Parts		
C531 C532 C533 C534 C801 C802	08T58184F01	Capacitor Feed Through
E1	01D47810F03	Speaker Output/Power Supply Connector

Symbol No.	Part No.	Description

Exploded View (Cabinet)



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C531~534
C801,802
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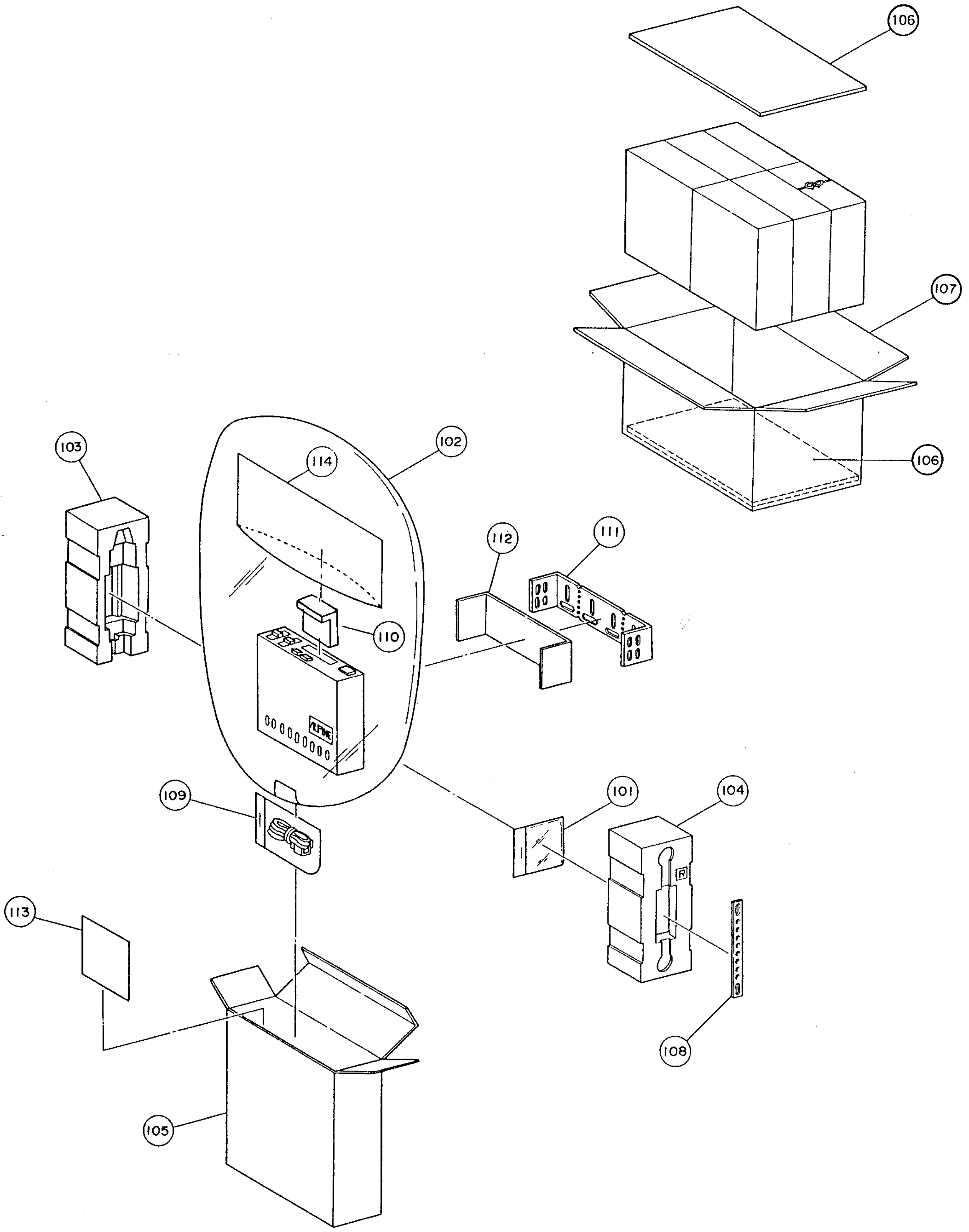
Cabinet Assembly Parts List

Symbol No.	Index	Part No.	Description
1		03S44205G07	Screw, Pan (M2.6 x 5)
2	5-B	※	Bracket, Deck (L)
3	5-C	36B58208F02	Knob, FF/REW (◀◀)
4	5-D	36B58208F01	Knob, FF/REW (▶▶)
6	5-D	36B58463F01	Assembly, Eject Knob
7	5-D	01V59200F83	Assembly, Switch, LED & Volume P.C. Board
8	5-E	43A41728U11	Bush, Lamp
9	5-E	36B58092F01	Knob, Push (Loudness)
10	5-E	36B58092F02	Knob, Push (Metal)
11	5-F	36B58092F03	Knob, Push (THC)
12	5-F	13C58194F01	Assembly, Nosepiece
13	5-F	36B58098F01	Knob, Volume
14	5-G	36A58097F01	Knob, Balance
15	5-G	36A58094F01	Knob, Bass/Treble
16	5-E	※	Fiber, Insulator
17	4-E	07A58473F01	Support, Lamp
20		03S44205G32	Screw, Bind (M3 x 5)
21		03S40011G77	Screw, Countersink (M3 x 6)
22		03S40011G99	Screw, Bind (M3 x 5)
23	4-B	※	Bracket, Deck (L)
24	4-B	81D52212F06	Cassette Deck (GW75B36N)
25	4-C	14S53018F17	Fiber, Insulator (65 x 8)
27	4-D	※	Chassis, Main
28	4-E	03S40012G47	Screw, Pan (M2.6 x 8)
29	4-E	※	Pad, Cushion
30	4-F	43A41728U02	Bush, Lamp
32	3-A	15C58165F01	Cover, Top
33	4-E	43A52836F11	Bushing, P.C. Board
34	3-B	03S44205G42	Screw, Pan (M2.6 x 4)
35	3-C	01V59200F84	Assembly, Reverse P.C. Board
36	3-C	※	Cover, Flywheel
37	3-D	03S40011G58	Screw, Pan (M2.6 x 3)
38	3-E		Assembly, Master P.C. Board
39	3-F	※	Chassis, Bottom
40	2-A	14S53018F56	Fiber, Insulator
41	2-C	※	Bracket, Deck (R)
42	1-C	※	Bolt, Hex. W/Washer (M5 x 8)
43	1-C	※	Label, Caution
44	1-C	03C40014G22	Screw, W/Washer (M3 x 8)
45	1-C	42B41424G04	Clamp, Cord
46		03S44205G33	Screw, Pan (M2.6 x 8)
47		03S43997P34	Screw, Pan (M2.6 x 10)
48	1-D	※	Heat Sink
49	1-E	※	Tube, Vinyl UL (60mm)
50	1-E	03S43997P10	Screw, Pan (M3 x 10)
51	1-E	※	Heat Sink, Sub
52	1-F	※	Bracket, IC
53	1-F	※	Fiber, Insulator
54		03S44205G30	Screw, Pan (M2.6 x 4)
55	4-B	14S58462F16	Fiber, Insulator
56	2-A	14S53017F59	Fiber, Insulator

Note: ※ The parts whose parts numbers are not entered will not be supplied.

Packing Method View



Packing Assembly Parts List

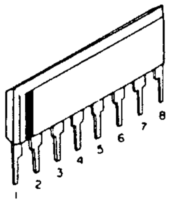
Symbol No.	Part No.	Description
101	01V59200F92	Assembly, Installation Kit
101-1	03B44963F01	Bolt, Hex W/Washer (M4 x 8)
101-2	03B44963F02	Bolt, Hex W/Washer (M5 x 20)
101-3	02B47353F01	Nut, Hex (M5)
101-4	03S40012G66	Screw, Tapping (M5 x 20)
101-5	03S40012G45	Screw, Tapping (M5 x 10)
101-6	65A40348G01	Fuse, (5A)
101-7	※	Sack, Polyethylene
102	56B40230G22	Sack, Polyethylene
103	56D58210F01	Tray, Packing
104	56D58210F02	Pad, Packing
105	56B47663F21	Carton, Packing (Individual)✱
106	※	Pad, Packing
107	※	Carton, Packing (Master)
108	07B44934F01	Bracket, Strap Receiver
109	01D45256F10	Assembly, Wire Kit✱
110	64B43136F01	Panel, Cassette
111	07B52108F01	Bracket, U Mounting
112	56A52180F01	Pad, Sheet
113	68P58585F70	Manual, Owner's ✱
114	56A61088F01	Sack, Cushion
Labels		
	54B42124G01	Serial No (Carton, Individual)
	54B43690F25	Composite (Chassis, Bottom)

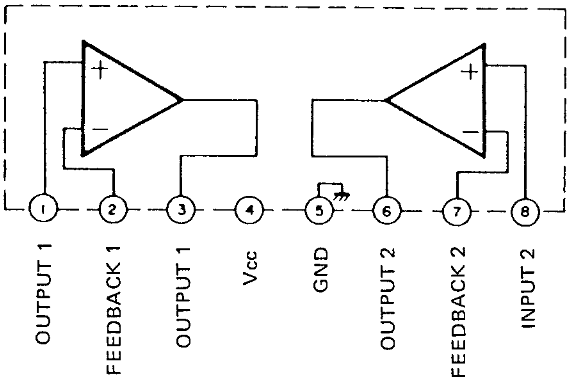
Symbol No.	Part No.	Description

Note: ※ The parts whose parts numbers are not entered will not be supplied.

Semi-Conductor Lead Identifications

M51522AL: IC201

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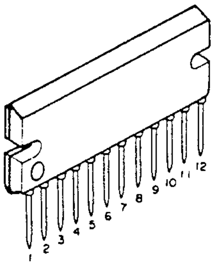
OUTPUT 1
Vcc
GND
OUTPUT 2
FEEDBACK 2
INPUT 2

MB3731M: IC501, 502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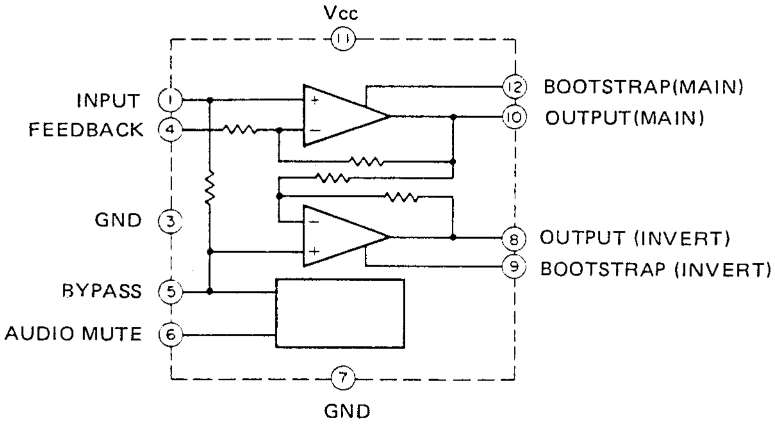
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AUDIO MUTE
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OUTPUT(MAIN)
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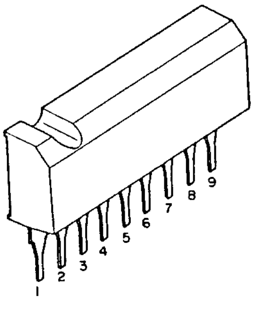
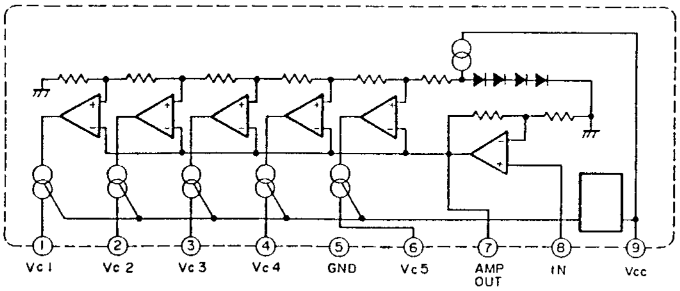
OUTPUT (INVERT)
9
BOOTSTRAP (INVERT)
7
GND

BA6154: IC503

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Vc 2
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Vc 3
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Vc 5
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AMP OUT
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IN
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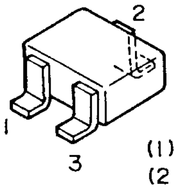
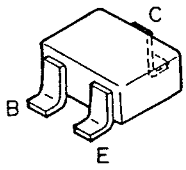
Vcc

DTA114S: Q203

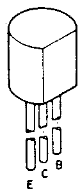


(1) IN
(2) OUT
(3) GND

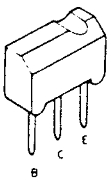
2SD601A: Q205, 206, 401, 402



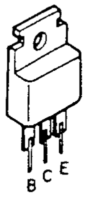
2SC1815: Q501, 502
2SA495: ┐
2SA1015: ┘ Q704, 708
2SA950: Q705



2SD636: Q701, 702, 703



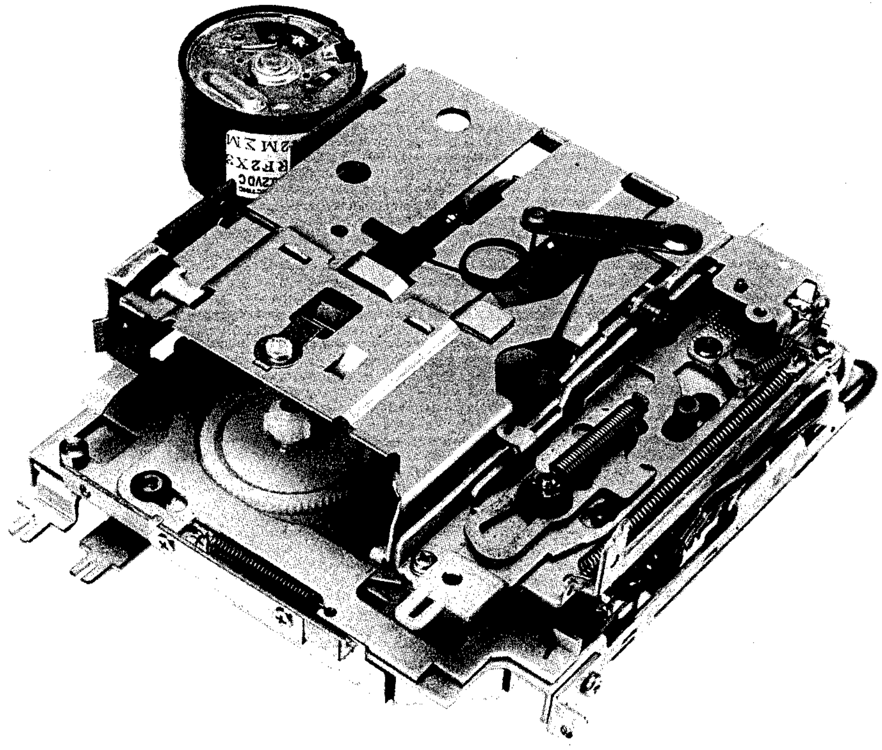
2SD880: Q706



ALPINE **SERVICE MANUAL** 7

Exploded View & Parts List For Cassette Deck Mechanism

— ADDENDUM & REVISED —



GW SERIES

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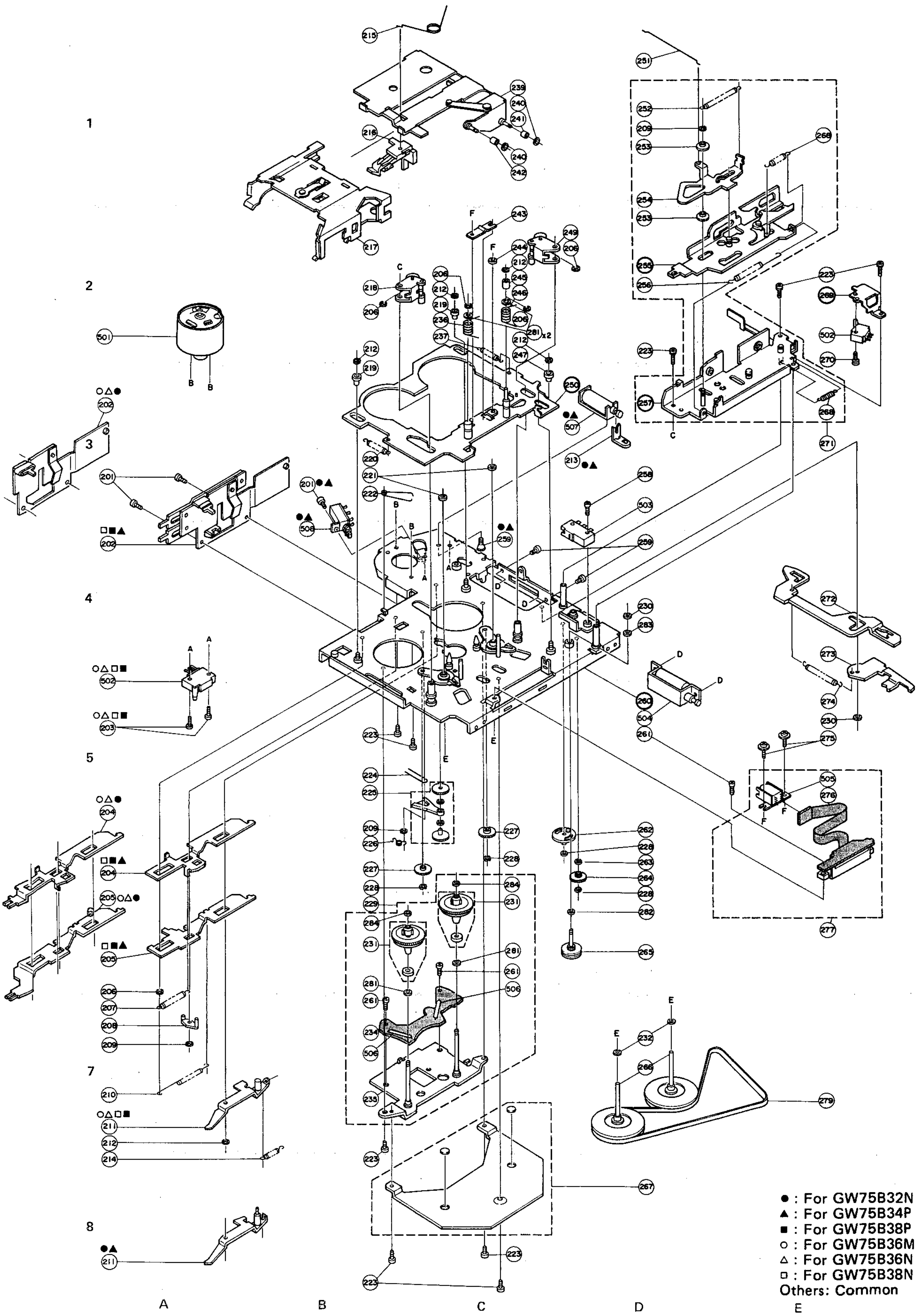
Parts List (GW75B38Z) .... 7 to 8
Replacement of Mechanical Parts .... 9 to 11

Exploded View (GW75B36M/36N/38N/32N/34P/38P)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281 x2
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○△□■
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● : For GW75B32N
▲ : For GW75B34P
■ : For GW75B38P
○ : For GW75B36M
△ : For GW75B36N
□ : For GW75B38N
Others: Common

Parts List (GW75B36M/36N/38N/32N/34P/38P)

The alpha-numeric codes suffixed to the numeric symbol numberes in the parts list dentify the location codes of the respective components in the exploded views.

GW75B36M/36N/38N/32N/34P/38P

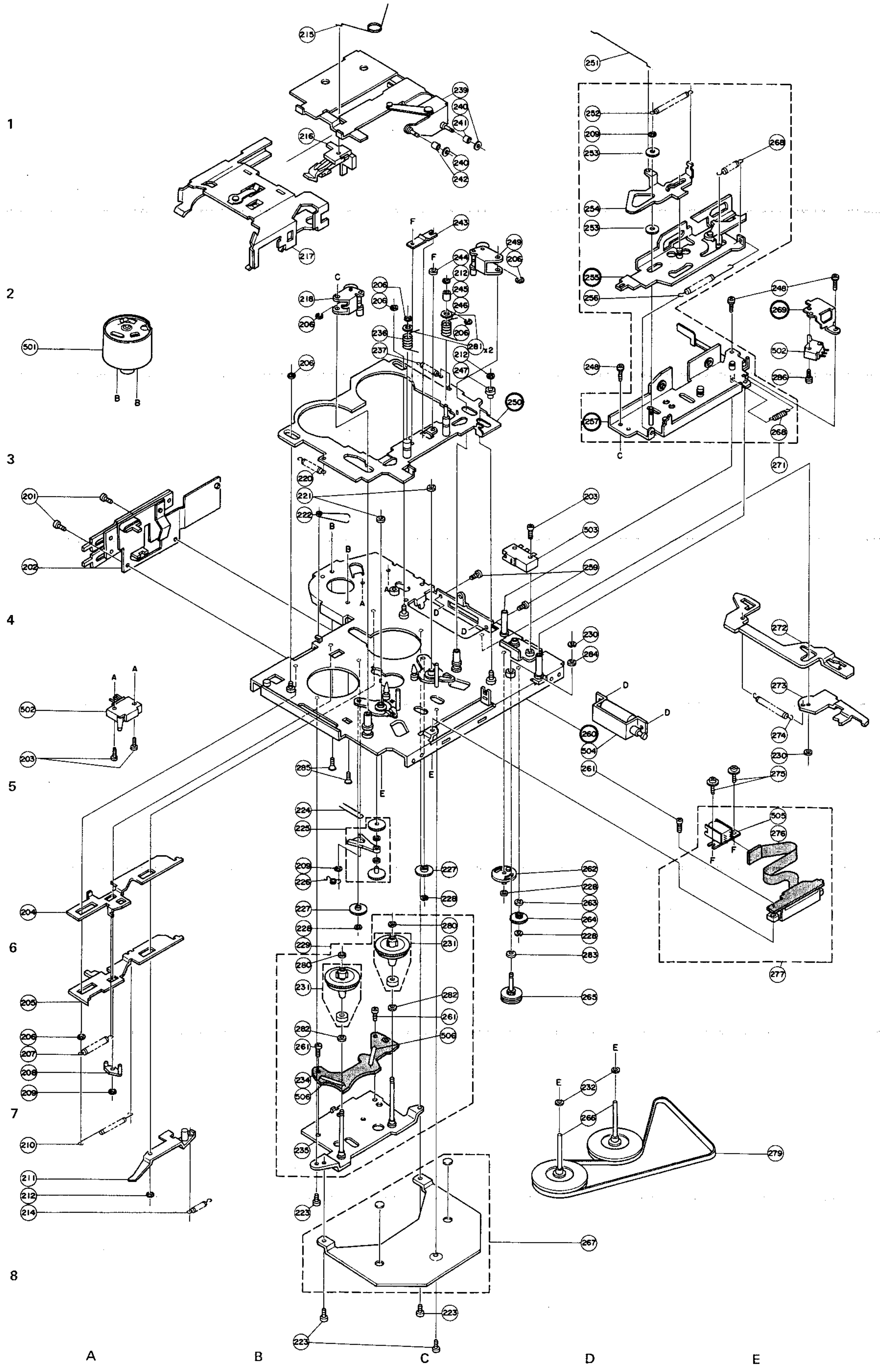
Symbol No.	Index	Part No.	Description
201	3A	03S44205G30	Screw, Pan (M2.6x4)
●○△202	4A	01A41659F01	Assembly, Rivet, Guide Bracket
□		01A41844F01	Assembly, Rivet Guide Bracket
▲■		01A56682F01	Assembly, Rivet Guide Bracket
203	5A	03S68259F16	Screw, Pan (M2x6.5)
○△204	6A	45C41236F01	Lever, REW
□■		45C41236F02	Lever, REW
●		45C41236F04	Lever, REW
▲		45C41236F05	Lever, REW
○△205	6A	45C41235F01	Lever, FF
□■		45C41235F02	Lever, FF
●		45C41235F04	Lever, FF
▲		45C41235F05	Lever, FF
206		04C42091G04	Ring, "E" (M3)
207	7A	41B41559F10	Spring
208	7A	45A45326F01	Link, R/F
209		04C42091G05	Ring, "E" (M2)
210	7A	41B41559F09	Spring
○△□■211	7A	01A63059F01	Assembly, Rivet, Lock Lever
●▲		01A65341F01	Assembly, Rivet Lock Lever
212		04C42091G06	Ring, "E" (M1.5)
●▲213	3D	45A45618F01	Lever, Mute Solenoid
214	7A	41B41559F16	Spring
215	1B	41A41590F03	Spring, Turn
216	1B	45B45858F01	Guide, Cassette
217	2B	01A69106F01	Assembly, Cassette Holder
218	2B	01T51012F01	Assembly, Pinch Roller
219	2B,2C	49A41005F01	Roller, Head Base
220	3B	41B41559F05	Spring
221	3B	43A44303P03	Washer, Oil Shield (M1.9)
222	3B	41A43244F01	Spring, B.T.
223		03D40014G12	Screw, W/Washer (M2.6x4)
224	5B	41A41393F01	Spring, R/F Idler Arm
225	5B	01C41353F01	Assembly, R/F Idler
226	6B	41A42613F01	Spring, R/F Idler
227	5C,6B	44A41406F01	Gear, Take Up
228		04A41345P01	Washer, Lock (M1.2)
229	6B	01V71100F30	Assembly, Reel Bracket
230		04A41345P02	Washer, Lock (M1.7)
231	6B,6C	01V71800F76	Assembly, Reel Magnet
232		04S40075G06	Washer, Polyslider (M2.1)
234	7B	84A69210F01	P.C.B., Reed SW
235	7B	01A41656F01	Assembly, Reel Shaft Bracket
236	2C	41A41453F02	Spring, Pinch Roller
237	2C	41B41559F04	Spring
239	1C	01A45981F01	Assembly, Rivet, Plate Base
240	1C	04A41345P21	Washer Lock (M1.7)
241	1C	43A41072F02	Spacer
242	1C	43A41072F03	Spacer
243	2C	41A45638F01	Spring, Head Adjust
244	2C	04S40075G07	Washer, Flat (M2.1)
245	2C	43A41079F01	Spacer

NOTE: (1) The parts without part numbers are not supplied.
(2) ○ : For GW75B36M, △ : For GW75B36N, □ : For GW75B38N, Others: Common
● : For GW75B32N, ▲ : For GW75B34P, ■ : For GW75B38P

Symbol No.	Index	Part No.	Description
246	2C	41A41453F01	Spring, Pinch Roller
247	2C	49A43395F01	Roller, Head Base
249	2D	01T51011F01	Assembly, Pinch Roller
251	1D	45A41392F01	Link, Connection
252	1D	41B41559F12	Spring
253	1D,2D	43A42872F01	Spacer
254	1D	45B41534F01	Lever, Sub
256	2D	41C45984F01	Spring
258	3D	03S56479F02	Screw, Bind (M2.3x8)
259	4D	03S56479F05	Screw, Countersink (M2x4)
261	5D	03S43997P62	Screw, Round (M2.6x3)
262	5D	44A51604F01	Gear, Change
263	6D	04S40075G03	Washer, Polyslider (M1.7)
264	6D	44A51603F01	Gear, Reverse Idler
265	6D	44A51602F01	Gear, Pulley Wheel
266	7D	01T42014F01	Assembly, Flywheel
267	8D	01V41500F39	Assembly, Flywheel Bracket
268	1E,3E	41C45984F12	Spring
270	2E	03D40014G15	Screw, W/Washer (M2x8)
271	3E	01V53600F83	Assembly, Eject Lever
272	4E	45B51596F01	Lever, R/F Release
273	4E	45A51599F01	Lever, Lock Reverse
274	5E	41C45984F13	Spring
275	5E	03S40019G03	Screw, F-Lock (M2x4)
276	5E	01V00100S50	Assembly, SW P.C.B.
△□277	6E	01V53600F85	Assembly, Head and SW
○		01V53800F89	Assembly, Head and SW
●		01V61100F79	Assembly, Head and SW
▲		01V64200F98	Assembly, Head and SW
■		01V74600F07	Assembly, Head and SW
279	7E	42A40969F01	Belt
281		04A66841F01	Spacer, Spring Pinch (M5)
282		04S40075G53	Washer, Polyslider (M2.2)
283		04A41345P12	Washer, Lock (M1.7)
284		04S40075G45	Washer, Polyslider (M2.1)
285		04S40075G46	Washer, Polyslider (M1.9)
Miscellaneous Parts			
501	2A	01V61500F28	Assembly, Motor
502	2E,4A	40T41665F01	Switch, Slide
503	3D	40T52216F01	Switch, Micro
504	5D	01T66520F01	Assembly, Reverse Solenoid
●△□505	5E	88T50977F01	Head, Playback
○		88T45248F01	Head, Playback
▲■		88T74470F01	Head, Playback
506	6C,7B	40T40641U02	Switch, Reed
●▲		01T66519F01	Assembly, Sensor Solenoid
●▲		40T43144U03	Switch, Push

NOTE: (1) The parts without part numbers are not supplied.
(2) ○ : For GW75B36M, △ : For GW75B36N, □ : For GW75B38N, Others: Common
● : For GW75B32N, ▲ : For GW75B34P, ■ : For GW75B38P

Exploded View (GW75B38Z)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Parts List (GW75B38Z)

The alpha-numeric codes suffixed to the numeric symbol numbers in the parts list dentify the location codes of the respective components in the exploded views.

GW75B38Z

Symbol No.	Index	Part No.	Description
201	3A	03S44205G30	Screw, Pan (M2.6x4)
202	4A	01A41844F01	Assembly, Rivet, Guide Bracket
203	5A	03S68259F06	Screw, Pan (M2.3x8)
204	6A	45C73930F02	Lever, REW
205	6A	45C73929F02	Lever, FF
206		04C42091G04	Ring, "E" (M3)
207	6A	41B41559F10	Spring
208	7A	45A45326F01	Link, R/F
209		04C42091G05	Ring, "E" (M2)
210	7A	41B41559F09	Spring
211	7A	01A63059F01	Assembly, Rivet, Lock Lever
212		04C42091G06	Ring, "E" (M1.5)
214	8A	41B41559F16	Spring
215	1B	41A41590F01	Spring, Turn
216	1B	45B45858F01	Guide, Cassette
217	2B	01A69106F01	Assembly, Cassette Holder
218	2B	01T71059F01	Assembly, Pinch Roller
220	3B	41B41559F05	Spring
221	3B	43A44303P03	Washer, Oil Shield (M1.9)
222	3B	41A43244F01	Spring, B.T.
223		03D40014G12	Screw, W/Washer (M2.6x4)
224	5B	41A41393F01	Spring, R/F Idler Arm
225	5B	01C41353F01	Assembly, R/F Idler
226	6B	41A42613F01	Spring, R/F Idler
227	6B,6C	44A41406F01	Gear, Take Up
228		04A41345P01	Washer, Lock (M1.2)
229	6B	01V71100F30	Assembly, Reel Bracket
230		04A41345P02	Washer, Lock (M1.7)
231	6B,6C	01V71800F76	Assembly, Reel Magnet
232		04S40075G06	Washer, Polyslider (M2.1)
234	7B	84A69210F01	P.C.B., Reed SW
235	7B	01A41656F01	Assembly, Reel Shaft Bracket
236	2C	41A41453F02	Spring, Pinch Roller
237	2C	41B41559F04	Spring
239	1C	01A71795F01	Assembly, Rivet, Plate Base
240	1C	04A41345P21	Washer Lock (M1.7)
241	1C	43A41072F02	Spacer
242	1C	43A41072F03	Spacer
243	2C	41A45638F01	Spring, Head Adjust
244	2C	04S40070G56	Washer, Flat (M2.1)
245	2C	43A41079F01	Spacer
246	2C	41A41453F01	Spring, Pinch Roller
247	2C	49A43395F01	Roller, Head Base
248		03D40014G06	Screw, W/Washer (M2.6x5)
249	2D	01T71060F01	Assembly, Pinch Roller
251	1D	45A41392F01	Link, Connection
252	1D	41B41559F12	Spring
253	1D,2D	04S40070G06	Washer, Flat (M3.8)
254	1D	45B61534F01	Lever, Sub

NOTE: * The parts without part numbers are not supplied.

Symbol No.	Index	Part No.	Description
256	2D	41C45984F10	Spring
259	4D	03S68259F15	Screw, P-Lock (M2x4)
261	5D	03S43997P62	Screw, Round (M2.6x3)
262	6D	44A51604F01	Gear, Change
263	6D	04S40075G03	Washer, Polyslider (M1.7)
264	6D	44A51603F01	Gear, Reverse Idler
265	6D	44A51602F01	Gear, Pulley Wheel
266	7D	01T42014F03	Assembly, Flywheel
267	8D	01V41500F39	Assembly, Flywheel Bracket
268	1E,3E	41C45984F12	Spring
271	3E	01V71800F70	Assembly, Eject Lever
272	4E	45B51596F01	Lever, R/F Release
273	4E	45A51599F01	Lever, Lock Reverse
274	5E	41C45984F13	Spring
275	5E	03S40019G03	Screw, F-Lock (M2x4)
276	5E	01V00100S50	Assembly, SW P.C.B.
277	6E	01V71800F75	Assembly, Head and SW
279	7E	42A40969F01	Belt
280		04A41345P12	Washer Lock (M1.7)
281		04A66841F01	Spacer, Spring Pinch (M5)
282		04S40075G53	Washer, Polyslider (M2.2)
283		04S40075G45	Washer, Polyslider (M2.1)
284		04S40075G46	Washer, Polyslider (M1.9)
285		03S68259F13	Screw, P-Lock (M2.6x3)
286		03S68259F16	Screw, P-Lock (M2x6.5)
Miscellaneous Parts			
501	2A	01V71800F71	Assembly, Motor
502	2E,4A	40T41665F01	Switch, Slide
503	3D	40T52216F01	Switch, Micro
504	5D	01T66520F01	Assembly, Reverse Solenoid
505	5E	88T71411F01	Head, Playback
506	7B,7C	40T40641U02	Switch, Reed

NOTE: * The parts without part numbers are not supplied.

Replacement of Mechanical Parts

1. Removal of Cassette Deck

(1) Remove cassette deck by following the disassembly instructions.

2. Removal of Eject Lever Assembly

(1) Remove the three screws marked "○" in Figure 1.

(2) Remove eject lever assembly.

3. Removal of Deck Cover

(1) Remove the one screw marked "★" in Figure 5.

4. Removal of Deck Front Bracket

(The deck front bracket is not provided to some models.)

(1) Remove two screws marked "◇" in Figure 5.

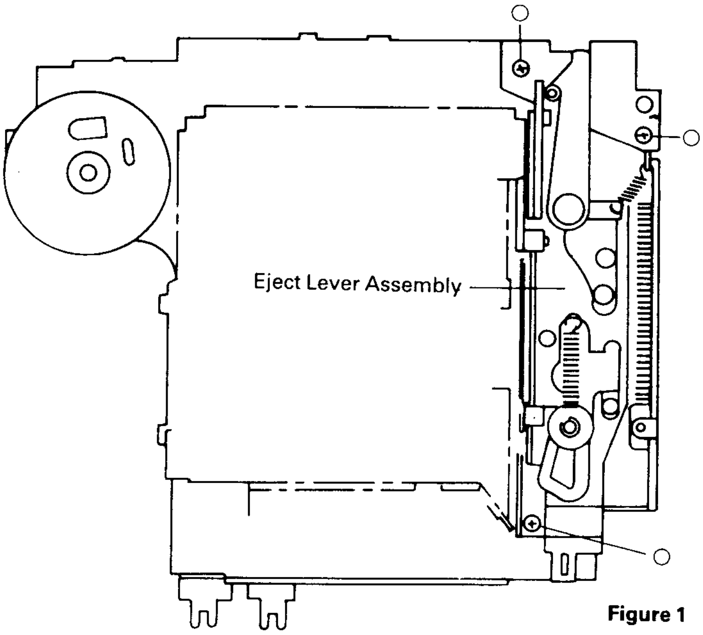


Figure 1

5. Replacement of Head

(1) Remove eject lever assembly.

(2) Remove the solder from the screw marked "△" and then remove that screw and the two screws marked "□" in Figure 2. Then remove the head and slide switch P.C. board.

(3) Remove head from the P.C. board.

(4) Replace the head, fix the new head and slide switch P.C. board loosely with three screws and assemble in the reverse order of disassembly.

(5) After assembling, adjust the position of the head and switch P.C. board as shown in Figure 3 so that the slide switch is equidistant from "normal" and "reverse". After adjusting, solder the screw marked "△" in Figure 2.

(6) With the test tape (MTT-114), adjust the head azimuth. (Refer to Head Azimuth Adjustment.) After adjusting, apply the Neji-lock to fix the screws.

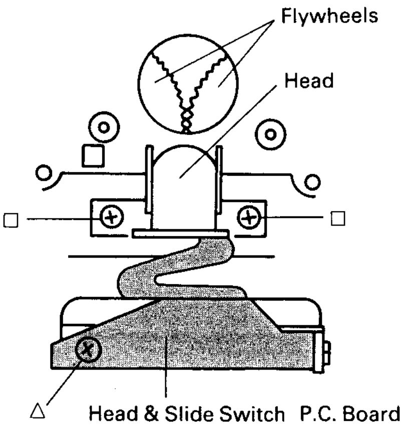


Figure 2

6. Replacement of Pinch Roller Assembly (L)

(1) Remove eject lever assembly.
(2) Remove two "E" rings and washer to remove the pinch roller assembly (L) and the pinch roller spring (L) as shown in Figure 4.
(3) Replace the pinch roller and clean it with absolute alcohol. Assemble in the reverse order of disassembly.
(4) With the test tape (MTT-111), check tape speed and wow/flutter.
(5) Remove pinch roller assembly (R) in the same manner as described above.

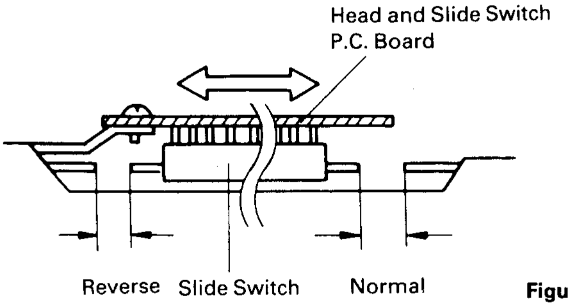

Head and Slide Switch P.C. Board
Reverse
Slide Switch
Normal

Figure 3

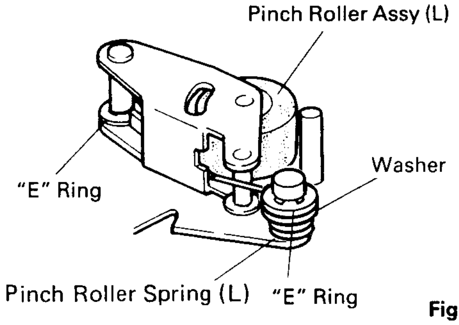

Pinch Roller Assy (L)
Washer
"E" Ring
Pinch Roller Spring (L)
"E" Ring

Figure 4

7. Replacement of Motor

(1) First remove the lead wire from the motor side.
(2) Remove two screws marked "•" in Figure 5.
(3) Replace the new motor. Assemble in the reverse order of disassembly.
(4) With the test tape (MTT-111), adjust the tape speed and check wow/flutter. (Refer to Tape Speed Adjustment.)

8. Replacement of Belt and Flywheels

(1) Remove three screws marked "X" and flywheel bracket in Figure 5 to take off the belt and the flywheel. Be careful not to lose the washers (Figure 6) as they come loose when the flywheels are removed.
(2) Replace the belt and flywheels, clean with absolute alcohol and assemble in the reverse order of disassembly.
(3) With the test tape (MTT-111), check tape speed and wow/flutter.

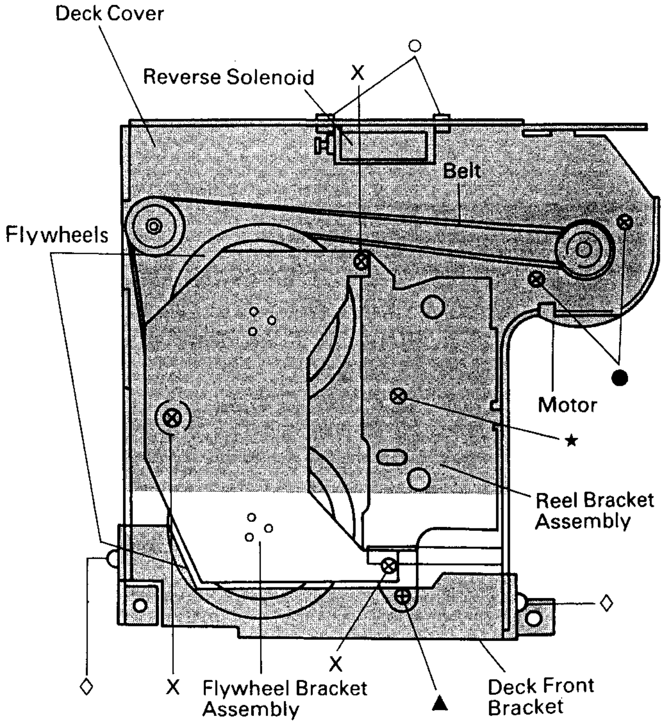

Deck Cover
Reverse Solenoid
X
○
Belt
Flywheels
Motor
●
★
Reel Bracket Assembly
◇
◇
X
Flywheel Bracket Assembly
X
▲
Deck Front Bracket

Figure 5

9. Replacement of Reed Switch P.C. Board and Reel

(1) Remove two flywheels.
(2) Remove the one screw marked "▲" in Figure 5.
(3) Remove the two screws marked "■" in Figure 6 to remove the guide bracket rivet assy.
(4) Remove B.T. spring in Figure 6 from reels and then remove the reel bracket.
(5) Remove the two screws marked "☆" in Figure 7 and disconnect the wire, remove the reed switch P.C. board.
(6) Remove the two lock washers in Figure 7 and remove the two reels.
(7) Assemble reel bracket after replacing with new reels and reed switch P.C. board. Assemble in the reverse order of disassembly, and confirm the proper positioning of the B.T. spring.
(8) With the test tape (MTT-111), check tape speed and wow/flutter.

10. Replacement of Reverse Solenoid

(1) Remove two screws marked "o" in Figure 6.
(2) Remove reverse solenoid.
(3) Replace the solenoid and assemble in the reverse order of disassembly.

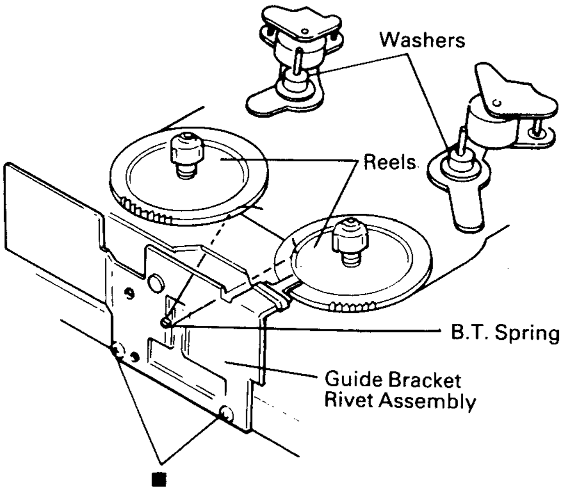

Washers
Reels
B.T. Spring
Guide Bracket
Rivet Assembly
■

Figure 6

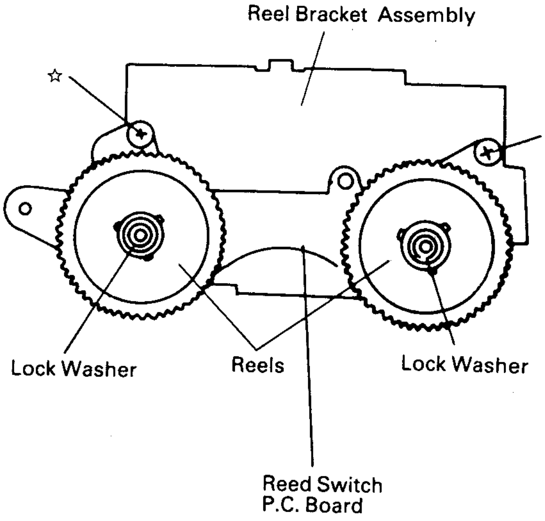
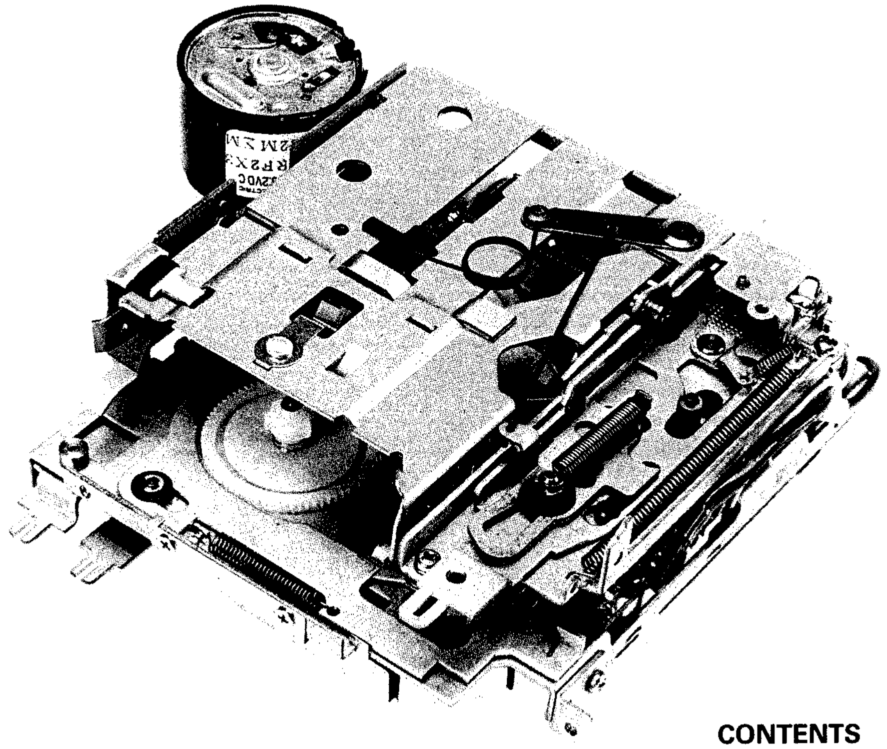

Reel Bracket Assembly
☆
☆
Lock Washer
Reels
Lock Washer
Reed Switch
P.C. Board

Figure 7

ALPINE SERVICE MANUAL

Exploded View & Parts List
For
Cassette Deck Mechanism

— ADDENDUM (GW75B38N) —
&
— REVISED —



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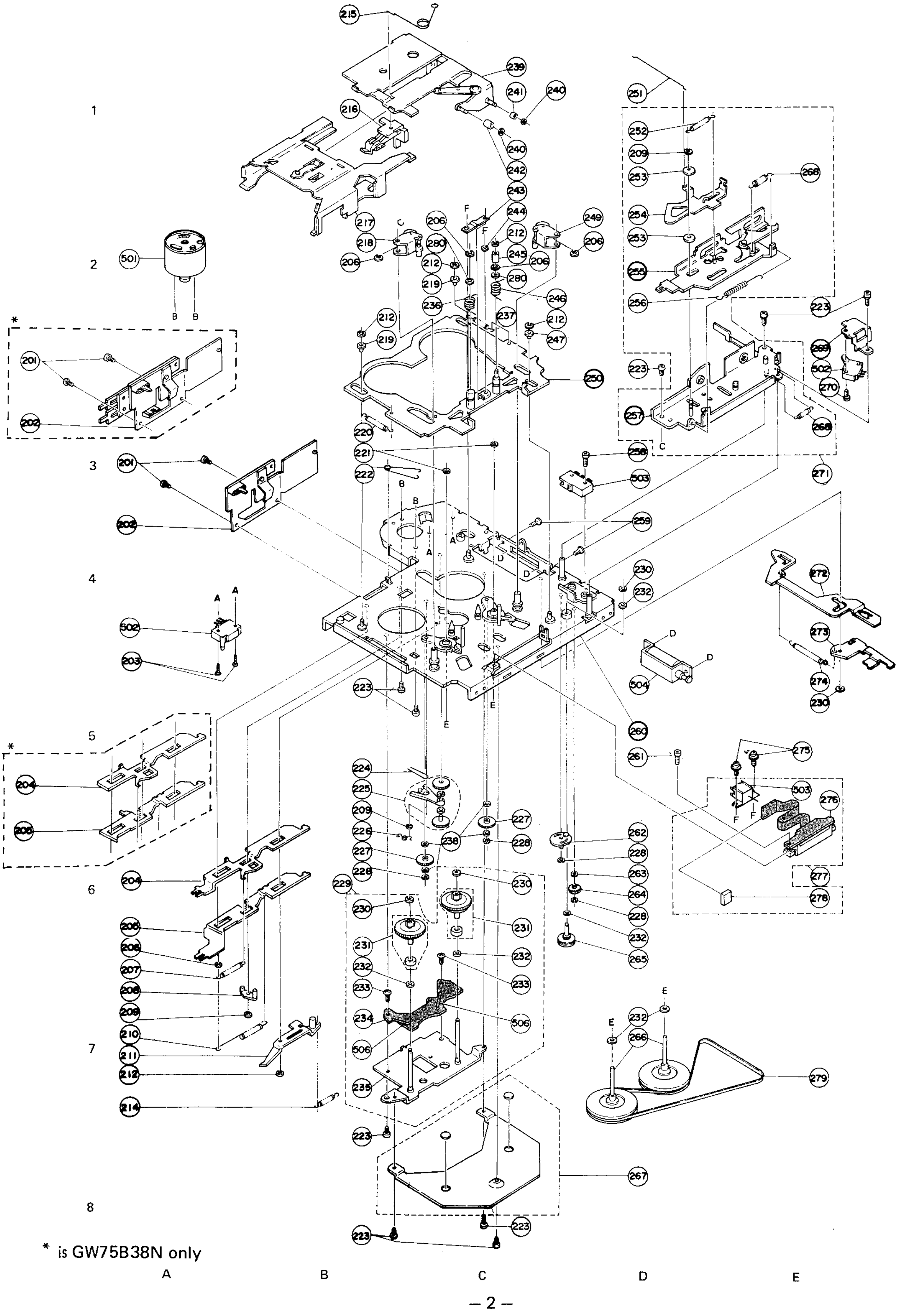
Exploded View 2
Parts List 3
Replacement of Mechanical Parts 5

GW SERIES

Exploded View (GW75B360/36M/36N/38N)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* is GW75B38N only

Parts List (GW75B360/36M/36N/38N)

The alpha-numeric codes suffixed to the numeric symbol numbers in the parts list dentify the location codes of the respective components in the exploded views.

GW75B360/36M/36N/38N

Symbol No.	Part No.	Description	Models			
			360	36M	36N	38N
201 3A	03S44205G30	Screw, Pan (M2.6x4)	○	○	○	○
202 4A	01A41659F01	Assy., Rivet, Guide Bracket	○	○	○	—
	01A41844F01	Assy., Rivet Guide Bracket	—	—	—	○
203 5A	03S56479F04	Screw, Pan (M2x7)	○	○	○	○
204 6A	45C41236F01	Lever, REW	○	○	○	—
	45C41236F02	Lever, REW	—	—	—	○
205 6A	45C41235F01	Lever, FF	○	○	○	—
	45C41235F02	Lever, FF	—	—	—	○
206	04C42091G04	Ring, "E" (M3)	○	○	○	○
207 6A	41B41559F10	Spring	○	○	○	○
208 7A	45A45326F01	Link, R/F	○	○	○	○
209	04C42091G05	Ring, "E" (M2)	○	○	○	○
210 7A	41B41559F09	Spring	○	○	○	○
211 7A	01A45979F01	Assy., Rivet, Lock Lever	○	○	○	○
212	04C42091G06	Ring, "E" (M1.5)	○	○	○	○
214 7A	41B41559F16	Spring	○	○	○	○
215 1B	41A41590F01	Spring, Turn	○	○	○	○
216 1B	45B45858F01	Guide, Cassette	○	○	○	○
217 2B	01A41658F01	Assy., Cassette Holder	○	○	○	○
218 2B	01T51012F01	Assy., Pinch Roller	○	○	○	○
219 2B, 2C	49A41005F01	Roller, Head Base	○	○	○	○
220 3B	41B41559F05	Spring	○	○	○	○
221 3B	43A44303P03	Washer, Oil Shield (M1.9)	○	○	○	○
222 3B	41A43244F01	Spring, B.T.	○	○	○	○
223	03C40014G12	Screw, w/Washer (M2.6x4)	○	○	○	○
224 5B	41A41393F01	Spring, R/F Idler Arm	○	○	○	○
225 5B	01C41353F01	Assy., R/F Idler	○	○	○	○
226 6B	41A42613F01	Spring, R/F Idler	○	○	○	○
227 6B, 6C	44A41406F01	Gear, Take Up	○	○	○	○
228	04A41345P01	Washer, Lock (M1.2)	○	○	○	○
229 6B	01V53600F86	Assy., Reel Bracket	○	○	○	○
230	04A41345P02	Washer, Lock (M1.7)	○	○	○	○
231 6B, 6C	01V41500F38	Assy., Reel Magnet	○	○	○	○
232	04S40075G06	Washer, Polyslider (M2.1)	○	○	○	○
233 7B, 7C	03S40019G71	Screw, F-Lock (M2.6x3)	○	○	○	○
234 7B	84A41741F01	P.C.B., Reed SW	○	○	○	○
235 7B	01A41656F01	Assy., Reel Shaft Bracket	○	○	○	○
236 2C	41A41453F02	Spring, Pinch Roller	○	○	○	○
237 2C	41B41559F04	Spring	○	○	○	○
238 6C	04S40075G02	Washer, Polyslider (M1.7)	○	○	○	○
239 1C	01A45981F01	Assy., Rivet, Plate Base	○	○	○	○
240 1C	04C42091G12	Ring, "E" (M1.2)	○	○	○	○
241 1C	43A41072F02	Spacer	○	○	○	○
242 1C	43A41072F03	Spacer	○	○	○	○
243 2C	41A45638F01	Spring, Head Adjust	○	○	○	○
244 2C	04S40070G56	Washer, Flat (M2.1)	○	○	○	○
245 2C	43A41079F01	Spacer	○	○	○	○
246 2C	41A41453F01	Spring, Pinch Roller	○	○	○	○
247 2C	49A43395F01	Roller, Head Base	○	○	○	○
249 2D	01T51011F01	Assy., Pinch Roller	○	○	○	○
250 3D	*	Assy., Rivet, Head Base	○	○	○	○

NOTE: * The parts without part numbers are not supplied.

Symbol No.	Part No.	Description	Models			
			360	36M	36N	38N
251 1D	45A41392F01	Link, Connection	○	○	○	○
252 1D	41B41559F12	Spring	○	○	○	○
253 1D, 2D	43A42872F01	Spacer	○	○	○	○
254 2D	45B41068F01	Lever, Sub	○	○	○	○
255 2D	*	Assy., Rivet, Eject Lever	○	○	○	○
256 2D	41C45984F10	Spring	○	○	○	○
257 3D	*	Assy., Rivet, Frame Lever	○	○	○	○
258 3D	03S56479F02	Screw, Bind (M2.3x8)	○	○	○	○
259 4D	03S56479F05	Screw, Countersink (M2x4)	○	○	○	○
260 5D	*	Assy., Rivet, Chassis	○	○	○	○
261 5D	03S43997P62	Screw, Round (M2.6x3)	○	○	○	○
262 6D	44A51604F01	Gear, Change	○	○	○	○
263 6D	04S40075G03	Washer, Polyslider (M1.7)	○	○	○	○
264 6D	44A51603F01	Gear, Reverse Idler	○	○	○	○
265 6D	44A51602F01	Gear, Pulley Wheel	○	○	○	○
266 7D	01T42014F01	Assy., Flywheel	○	○	○	○
267 8D	01V41500F39	Assy., Flywheel Bracket	○	○	○	○
268 1E, 3E	41C45984F12	Spring	○	○	○	○
269 3E	*	Bracket, Eject, Mute	○	○	○	○
270 3E	03C40014G15	Screw, w/Washer (M2x8)	○	○	○	○
271 3E	01V53600F83	Assy., Eject Lever	○	○	○	○
272 4E	45B51596F01	Lever, R/F Release	○	○	○	○
273 4E	45A51599F01	Lever, Lock Reverse	○	○	○	○
274 5E	41C45984F13	Spring	○	○	○	○
275 5E	03S40019G03	Screw, F-Lock (M2x4)	○	○	○	○
276 5E	01V00100S50	Assy., SW P.C.B.	○	○	○	—
277 6E	01V53600F85	Assy., Head and SW	○	—	○	○
	01V53800F89	Assy., Head and SW	—	○	—	—
278 6E	75B44632G13	Pad, Cushion	○	○	○	○
279 7E	42A40969F01	Belt	○	○	○	○
280	04A66841F01	Spacer, Spring Pinch	○	○	○	○
		Miscellaneous Parts				
501 2A	01V61500F28	Assy., Motor	○	—	—	—
	01V61500F28	Assy., Motor	—	○	○	○
502 3E, 4A	40T41665F01	Switch, Slide	○	○	○	○
503 3D	40T52216F01	Switch, Micro	○	○	○	○
504 5D	01T51605F01	Assy., Reverse Solenoid	○	○	○	○
505 5E	88T50977F01	Head, Playback	○	—	○	○
	88T45248F01	Head, Playback	—	○	—	—
506 7B, 7C	40T40641U02	Switch, Reed	○	○	○	○

NOTE: * The parts without part numbers are not supplied.

Replacement of Mechanical Parts

1. Removal of Cassette Deck

(1) Remove cassette deck by following the disassembly instructions.

2. Removal of Eject Lever Assembly

(1) Remove the three screws marked "○" in Figure 1.
(2) Remove eject lever assembly.

3. Removal of Deck Cover

(1) Remove the one screw marked "★" in Figure 5.

4. Removal of Deck Front Bracket

(The deck front bracket is not provided to some models.)
(1) Remove two screws marked "◊" in Figure 5.

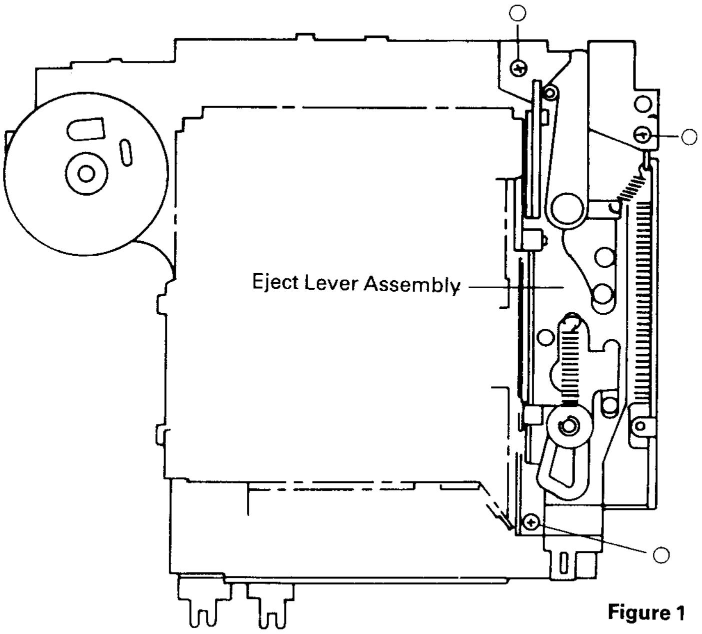

Figure 1

5. Replacement of Head

(1) Remove eject lever assembly.
(2) Remove the solder from the screw marked "△" and then remove that screw and the two screws marked "□" in Figure 2. Then remove the head and slide switch P.C. board.
(3) Remove head from the P.C. board.
(4) Replace the head, fix the new head and slide switch P.C. board loosely with three screws and assemble in the reverse order of disassembly.
(5) After assembling, adjust the position of the head and switch P.C. board as shown in Figure 3 so that the slide switch is equidistant from "normal" and "reverse". After adjusting, solder the screw marked "△" in Figure 2.
(6) With the test tape (MTT-114), adjust the head azimuth. (Refer to Head Azimuth Adjustment.) After adjusting, apply the Neji-lock to fix the screws.

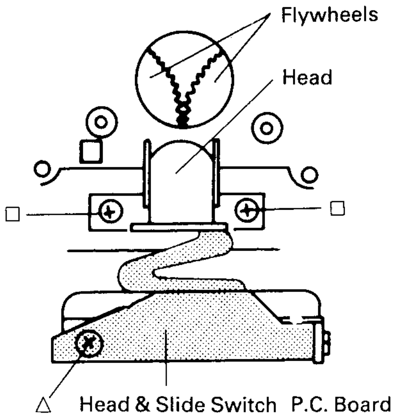

Figure 2

6. Replacement of Pinch Roller Assembly (L)

(1) Remove eject lever assembly.
(2) Remove pinch roller spring (L), "E" ring and washer to remove the pinch roller assembly (L) as shown in Figure 4.
(3) Replace the pinch roller and clean it with absolute alcohol. Assemble in the reverse order of disassembly.
(4) With the test tape (MTT-111), check tape speed and wow/flutter.
(5) Remove pinch roller assembly (R) in the same manner as described above.

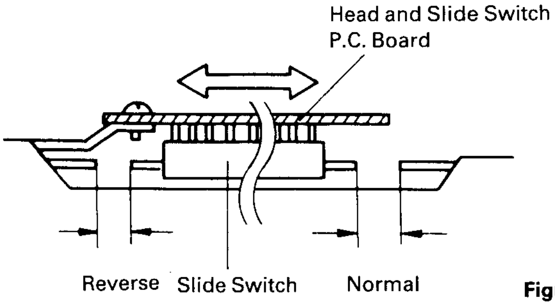
Head and Slide Switch P.C. Board
Reverse
Slide Switch
Normal

Figure 3

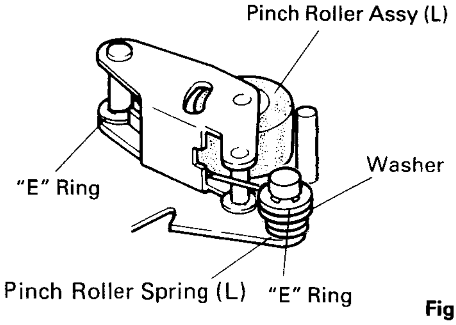
Pinch Roller Assy (L)
Washer
"E" Ring
Pinch Roller Spring (L)
"E" Ring

Figure 4

7. Replacement of Motor

(1) First remove the lead wire from the motor side.
(2) Remove two screws marked "●" in Figure 5.
(3) Replace the new motor. Assemble in the reverse order of disassembly.
(4) With the test tape (MTT-111), check tape speed and wow/flutter.

8. Replacement of Belt and Flywheels

(1) Remove three screws marked "X" and flywheel bracket in Figure 5 to take off the belt and the flywheel. Be careful not to lose the washers (Figure 6) as they come loose when the flywheels are removed.
(2) Replace the belt and flywheels, clean with absolute alcohol and assemble in the reverse order of disassembly.
(3) With the test tape (MTT-111), check tape speed and wow/flutter.

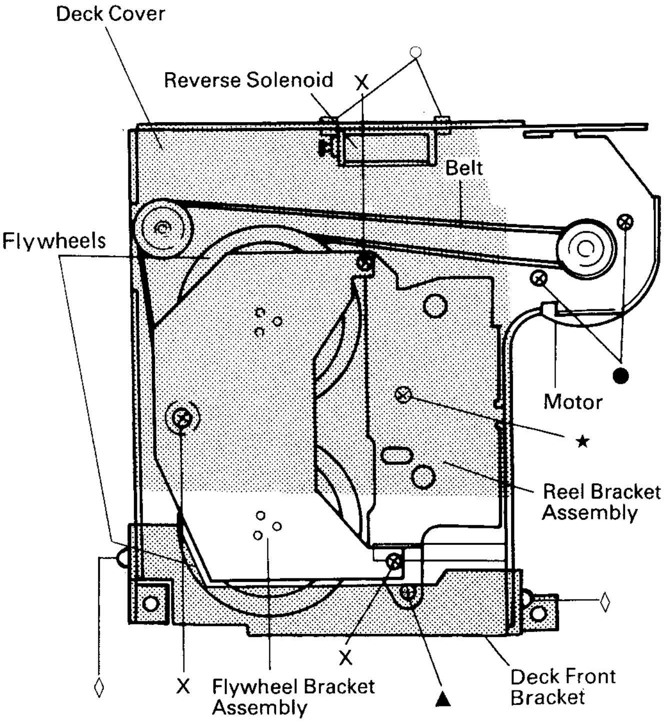
Deck Cover
Reverse Solenoid
X
◊
Belt
Flywheels
●
Motor
★
Reel Bracket Assembly
◊
X
◊
X
Flywheel Bracket Assembly
▲
Deck Front Bracket

Figure 5

9. Replacement of Reed Switch P.C. Board and Reel

(1) Remove two flywheels.
(2) Remove the one screw marked "▲" in Figure 5.
(3) Remove the two screws marked "■" in Figure 6 to remove the guide bracket rivet assy.
(4) Remove B.T. spring in Figure 6 from reels and then remove the reel bracket.
(5) Remove the two screws marked "☆" in Figure 7 and disconnect the wire for the removal of the reed switch P.C. board
(6) Remove the two lock washers in Figure 7 and the two reels.
(7) Assemble reel bracket after replacing with new reels and reed switch P.C. board. Assemble in the reverse order of disassembly, and confirm the proper positioning of the B.T. spring.
(8) With the test tape (MTT-111), check tape speed and wow/flutter.

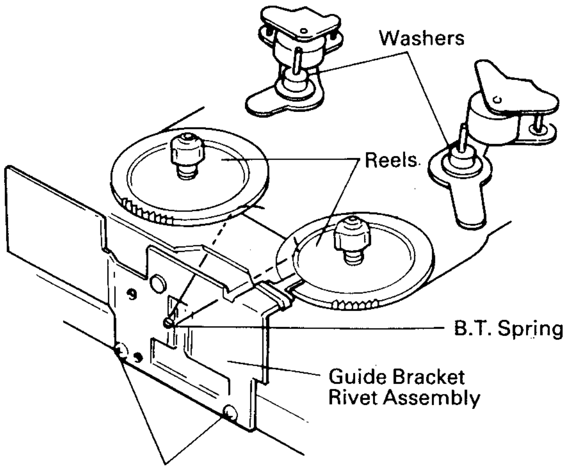
Washers
Reels
B.T. Spring
Guide Bracket
Rivet Assembly
■

Figure 6

10. Replacement of Reverse Solenoid

(1) Remove two screws marked "○" in Figure 6.
(2) Remove reverse solenoid.
(3) Replace the solenoid and assemble in the reverse order of disassembly.

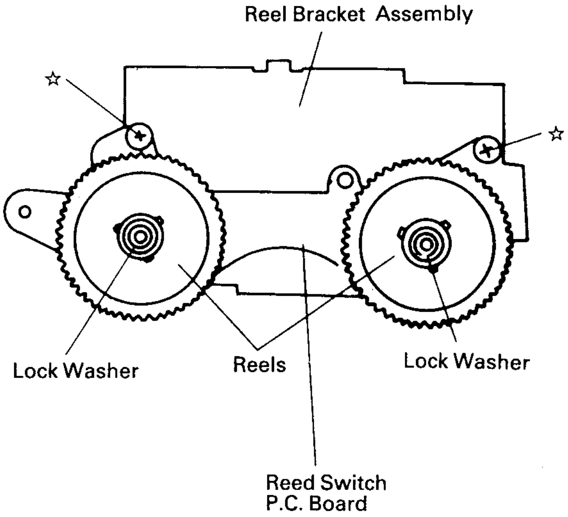
Reel Bracket Assembly
☆
☆
Lock Washer
Reels
Lock Washer
Reed Switch
P.C. Board

Figure 7